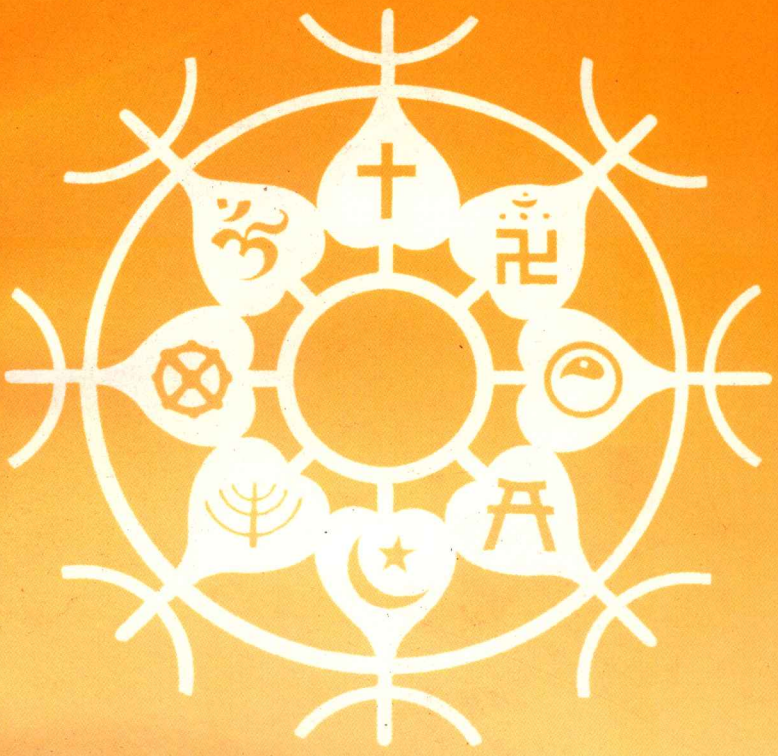
JOURNAL OF
DHARMA



ECOLOGICAL CONCERNS

October-December 2006 Vol. 31, No. 4

JOURNAL OF DHARMA
An International Quarterly of Religions and Philosophies

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JOURNAL OF DHARMA

October-December 2006 Vol. 31, No. 4

ECOLOGICAL CONCERNS

Published by
Dharma Research Association
Centre for the Study of World Religions
DVK, Dharmaram College P. O.
Bangalore 560 029, India
Tel. +91-80-4111 6111; Fax: +91-80-4111 6000
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Journal of Dharma 31, 4 (October-December 2006), 387-406

Editorial

ECOLOGICAL CONCERNS

Adverse Impact of Religion, Economy, and Politics

Journal of Dharma is published from Bangalore, a city located in south India. Bangalore was known as the Garden City of India, both for its salubrious climate and an abundance of trees and large stretches of gardens maintained within the city limits. I arrived in this city, as a university student, in 1985, and had the fortune of experiencing the glories associated with the Garden City. Over the last 20 years, Bangalore has undergone a sea-change by the migration of millions of people from different parts of India and abroad. As more and more people are flowing in, as more and more employment opportunities are generated, especially in the IT-related segments, the city also has become quite different from what it used to be. More and more water-bodies are vanishing everyday; in fact, the handful of water-bodies that still remain extinction in the context of rapid developmental activities. Gone are the days when you would see varieties of magnificent trees on both sides of every road; though the old gardens can still be located, they too have become less attractive due to the increasing levels of pollution and contamination of soil, water, and atmosphere. The practice of taking a refreshing walk through the city roads is almost impossible as the vehicles plying through Bangalore roads have sky-rocketed over the last 10 years. Further, the Bangalore weather has undergone tremendous change; indeed, it has become warmer and almost unpredictable! Is this peculiar to Bangalore alone? No, not at all! In fact, the sketch I have tried to draw about Bangalore, indicating a lot of distortions with regard to the landscape and weather, people and their lifestyle, would be shared by almost all cities, though the degree and extent would be different in specific cases.

What has happened to Bangalore, however, is an indication of what is happening elsewhere in the world, and the changes that we experience here are heralds of what is in store for humanity. India, in general, or its southern part, in particular, boasts about its religious ethos and large following of practising believers. Almost everyone living in Bangalore has adherence to one or another religion, with a large majority belonging to Hinduism. In spite of the religious allegiance of the majority of Bangaloreans, these religions seem to be having almost no impact upon the changes that are taking place in the life and surroundings of the people. While the politicians

and the bureaucrats continue to be immersed in large-scale developmental works (as it has turned out to be the most lucrative business Bangalore has ever witnessed, in the name of which nature is butchered and large amount of public funds are unjustly siphoned out by the self-styled but 'democratically' elected custodians of Bangalore development) that has adversely affected the natural surroundings of Bangalore, not many religious heads have come out in the open to call for a change of developmental patterns, or to exhort his/her following to abide by a respect for nature without curtailing the prospects for development and all benefits that accrue from such developmental activities; in effect those who claim to be practising believers are almost untouched by their acclaimed religious foundation when it comes to environmental issues.

A question may be posed: what business has religion got to do with development in Bangalore or elsewhere? Is religion supposed to be an involved party in the issues related to the changing natural surroundings and high-tech developments that bring with it greater wealth and better living conditions? Can't religion be restricted to private domains than intruding into those domains under the auspices of secular and democratic forces? In answering the above queries, I tend to hold that religion is not merely a private affair at all; though it begins with a personal faith affirmation in the case of individuals, it must reach every recess of life, affirming all life-giving and life-enhancing aspects and denying all that is life-threatening and life-denying, whether it occurs in private or public domains. Religion being a view and a way of life at the same time, it should reach out to all domains of life, in a very special way, inspiring and animating every religious person to lead a life conducive to the integral co-existence of all, living and non-living, sentient and non-sentient.

In fact, we are confronted with a cluster of interlocking problems that surround our nature and threaten the very matrix of life, the future of humanity, and survival of the universe. In the name of development and modernity indiscriminate methods have been adopted by many in handling the natural resources. Although the available renewable and non-renewable natural resources are limited, the present generation, the world over, is blissfully ignorant or careless about it, and tends to behave as if these resources could be indiscriminately exploited to serve present purposes. The

clarion call from many concerned individuals and organizations[1] for initiating and maintaining a sustainable development is still unheeded both by private individuals and national governments.[2] Many of the developmental practices, and the accompanying political strategies adopted by multi-national business corporations and governments seem to be quite insensitive to the nature and natural habitats of millions of species that maintain the balance of life on earth. Indiscriminate exploitation of natural resources in the name of economic development is so widespread and is carried out under the protective shield of the ruling political parties. Although the situation is almost beyond the control of one or another individual or organization, it is the need of the hour that these issues are squarely faced and controlled through a definitive plan of action.

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[1]The "Rio Declaration" (1992) has finally agreed upon the following statements: (i) People are entitled to a healthy and productive life in harmony with nature, (ii) Development today must not threaten the needs of present and future generations, (iii) Nations have the right to exploit their own resources, but without causing environmental damage beyond their boundaries, (iv) Environmental protection shall constitute an integral part of the development process, (v) Eradicating poverty and reducing disparities in living standards in different parts of the world are essential if we are to achieve sustainable development whilst meeting the needs of the majority of the people, (vi) Environmental issues are best handled with the participation of all concerned citizens, (vii) The polluter should, in principle, bear the cost of pollution, and (viii) Sustainable development requires better scientific understanding of the problems. Nations should share knowledge and technologies to achieve the goal of sustainability.

[2]Response of George W. Bush, the president of USA, on the "Kyoto Environmental Summit on Global Warming (December 1997)," is quite revealing. Although it was accepted after a lot of lobbying among different member states, Bush administration abandoned the Kyoto Treaty. In doing this, Bush declared: "I will not commit our nation to an unsound international treaty, that will throw millions of our citizens out of work. Yet we recognize our responsibilities." Cited in Tapan Biswal and Manish Kumar, "UN Environment Programme: Rio, Johnesburg and After," in *Human Rights, Gender and Environment*, ed. Tapan Biswal, New Delhi: Viva Books, 2006, 399. Interestingly, a treaty that is welcomed by almost all member states is rejected as 'unsound' by the US, precisely on the ground of adverse impact upon their economy; adverse impact upon the climate emerges as a secondary concern. This adamant posture indicates that anything that would challenge the present lifestyle and industrial practices would be rejected without any further thought.

In the context of developmental issues and the resulting environmental concerns, the South and North are again at loggerheads. The call for restraint in development emerging from the Northern countries, specifically addressing the Southern economies, is many a time rejected as insensitive to the needs of the latter.

> The most industrialized nations of the world have produced enough CFCs [Chloro Fluoro Compounds] to generate dangerous holes in the ozone layer of the atmosphere, with deleterious effects on the health of the entire world's plant, animal, and human population... The poor and developing nations around the world (primarily in the global South) attempt to satisfy their rights to development as the rich, industrialized nations (primarily in the global North) call for environmental protection against the same development practices that they themselves invented and used for decades and which introduced much of the environmental degradation we see around the world today.[3]

It is a fact that the North has realized the adverse impact of development only after having attained a greater growth rate over the last two centuries, and in achieving this growth rate they were involved in indiscriminate business practices in which the natural resources around the globe have been exploited beyond any reasonable limits. The nations in the South, however, have started off only quite late in this race for economic growth – with an *unrealizable* goal of the economic and living standards of the North – and are looking forward to quick bucks by accessing most of the resources left untapped by the North, but in the South. The 'enlightened' North, then, begins moralizing the whole situation, and critiques every industrial practice of the South without, however, sharing the know-how or nature-friendly methods of development. In fact, while discussing a lot of issues from the developing world, and making those nations responsible for the same, many affirm that all such practices must be stopped; however, no word is directly mentioned about the developed nations, which have already contributed most to the environmental crises that we face today; they have already made their road through development – of course, at the cost of the nature and other economies. As they lament about the present attempts of

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[3]Robert Figueroa and Claudia Mills, "Environmental Justice," in *A Companion to Environmental Philosophy* (Blackwell Companions to Philosophy Series), ed. Dale Jamieson, Oxford: Blackwell, 2001, 426.

the developing nations to stand on their feet, it should naturally provide an ambience to question and challenge the apathy that many developed nations (especially its irresponsible governments) have been exhibiting to initiate corrective measures. All these nations, whether in the North or the South, do lack political will to adopt alternate modes of development without endangering the whole creation. It is already accepted on international level that the polluter should be accountable to the pollution, and should be made to bear the cost of rectifying the situation. This must be enforced even if it would require a reversal of a lot of developmental activities as well as 'developed' habits and lifestyles of peoples, both in the industrially developed and developing countries.

The destruction of environment that we witness today has begun long ago, along with industrialization of almost every field, including agriculture. It was a sudden surge and a leap into the future: from the limited and apparently innocent practices of a village craftsman and his shop, humanity was making leaps into mechanized production units and aggressive distribution systems. As the volume of production was increased and the extent of distribution enlarged – both for the sake of better profits – industrialization began to eat up the chunk of nature and natural resources. Eighteenth and nineteenth centuries' rationalization processes have led humanity to this high-paced industrialization, through which technological and economical efficiency was made to be the imperative of human achievements. As this slogan was spread to every facet of human existence, ranging from the things of everyday need to the most sophisticated electric and electronic gadgets and precision instruments, factories began to incorporate many an environmentally insensitive practices. They adopted certain methods of tapping on to the available sources of raw materials without any thought of replacement; they adopted no sustainable processes of waste management; they concentrated only on efficiency in production – both qualitatively and quantitatively – and the ensuing increase in profit. At a time when industrialization became so fashionable in the now-industrialized world, it was the right of everyone who had the necessary capital and the know-how (and, of course, the much needed political patronage) to involve in any business practice indiscriminately, if that would produce goods of consumption effectively, meaning higher quality goods in a cost-effective manner. One of the consequences of this indiscriminate industrial practice is the objectification of nature.

> Nature, which had been a terrifying swarm of deities at one time, a partner in human endeavour for 10,000 years, became at best a simple warehouse of "raw materials," "resources," ripe for exploitation, and at worst a cowering adversary ripe for destruction. The century that gave us "science," as the method that turns everything into value-neutral objects, finally reduced all approaches to nature to a simple utilitarian (some times called "positivism"), which completed the depersonalization of nature.[4]

Although there are many other ways of seeing and approaching nature, an industrially motivated people – generation after generation – adopted a mode of objectifying nature for convenience and utility. This has led to certain behavioural changes among human beings, as they began to interpret everything in nature as something to be controlled and used to fulfil human wants and desires.[5]

Every realm of human living is infused with a world view of dominion over nature. This is particularly visible, for example, in the contemporary business practices. The emphasis in business is on an increase of profit or the shareholders' wealth, which is usually attained through aggressive business practices primarily centred on the exploitation of natural resources, mostly acquired at the lowest possible investment. In the competitive world of international business practices, the environmental damages are hardly treated in realistic terms, but are mostly treated as contingencies or externalities that cannot be avoided if successful business is to be conducted. As the career prospects of the involved individuals and the profit for the whole of business would significantly depend on their ability to utilize every possible resource, everyone is directly or indirectly forced to continue to exploit nature to the maximum extent. Nature is taken

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[4]Lisa H. Newton, *Business Ethics and the Natural Environment*, Oxford: Blackwell, 2005, 5.

[5]Surprisingly, it is claimed that human beings, though only one of the millions of animal species on the earth, consume almost 40 per cent or more of the total resources available; and, as the years go by, the amount is on the increase. If this is the case with regard to human consumption, it is impossible to sustain such practices, as these resources are limited in quantity. Moreover, it must also be realized that the high rate of consumption will have its adverse consequences on other species, especially because human beings are taking from the share of every other form of life as well. See Peter Vitousek, Paul R. Ehrlich, Anne H. Ehrlich, and Pamela Matson, "Human Appropriation of the Products of Photosynthesis," *BioScience* 36 (1986).

to be a bounty to supply all needed raw materials, and as a dumping ground of all that is considered to be waste once the designed product is made. The aggressive business strategy adopted by many business corporations can be sustained only if all the involved parties boost the earnings, constantly moving on an upward graph.

If the above example is taken in all its seriousness, we understand that the degradation taking place within the nature is fundamentally based on attitudes, perspectives, or the world views adopted by individuals. As it is stated by Skolimowski, "contaminated minds produce, almost of necessity, contaminated environments."[6] The present status of our environment indicates that there is widespread flaw in the human handling of nature as a whole, resulting in its destruction and contamination at extensive levels. Indeed, individuals as well as groups of people are to be held responsible for almost all issues of environmental pollution and the indiscriminate use and the consequent depletion of natural resources. Although, from a moral perspective, individual human persons could be finally held responsible for all these, it may not be possible to exonerate certain key agencies in this regard. It may not be an easy task to list all the involved parties; however, the role of religion, economy, and political agents is of vital importance, as all these three have been directly or indirectly contributing to the ill effects that we experience in our environment. Hence, any search for a solution in this regard has to first take into account how the *unholy alliance* among the above mentioned triple entities has resulted in destabilizing ecological balance, especially in the twentieth century.

A perusal through the sacred scriptures of various religions indicates that almost all of them have originally inculcated a respectful attitude towards nature as a whole. Starting with the ancient scriptures of the Hindus, the Vedas, and the scriptures of the Semitic religions, almost all of them repeatedly portray a symbiotic relationship between human beings and nature, and call forth to maintain the same with human conscious efforts.[7]

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[6]Henryk Skolimowski, *Dharma, Ecology and Wisdom in the Third Millennium*, New Delhi: Concept Publishing Company, 1999, 12.

[7]Koran also attests to the positive mandate given to human beings in ministering to the creation with a spiritual vision infused by Allah: "... He created all, including man. To man He gave a special place in His creation. He honoured man to be His agent, and to that end, imbued him with understanding. Purified his affections, and gave him spiritual insight, so that man should understand Nature,

That is, religions originally had a life vision that was integral and holistic that catered not only to human levels, but also to every sphere of creation, including inert matter (see Col. 1:15-17). However, in the course of time, such a vision seems to have lost its impact. Historically, due to the distortions of religious tenets, almost all religions passed through dark ages, during which not only religious principles and practices were not capable of enhancing the life of their members, but also caused and perpetuated life-negating ambiences. This went to the extremes of justifying any exploitative attempts from those in power, mostly at the pretext of serving and saving the needs of the community. Surprisingly, at this level of religious consciousness, individual persons and various natural elements were almost neglected and manipulated, apparently for serving the interest of the whole society, which was elevated to the zenith of religious practice, mostly by vested interests.

All these dynamics were clearly visible in the development of Christianity in the West and in the adverse impacts on natural environment. Although Semitic religions have a particular pattern of thinking, hailing from their shared roots and world view, devious interpretations of the Christian religious tenets had been instrumental in accelerating the aggressive exploitation of the natural resources. It is true that the Bible considers the world as respectful, as it stands in relationship with God; in fact, human beings are placed in this world as the only possible link between God and the creation. The original vision of creation as portrayed in the Bible projects the presence of human being as one of enabling the whole nature/creation to be itself and to be in communion with God, with the possibility of both human and the nature being sanctified simultaneously. The freedom of human beings that would initiate this process, according to the Bible, hints at human beings as capable of enhancing or condemning the creation, by treating it as an integral part of their existence or as an object altogether separate, thus providing scope for mutual sanctification or condemnation (shareable by the human in relation to the nature). The Christian view of freedom attached to humanity implies a heavy responsibility for the destiny of creation; this responsibility implies not only a passive indifference towards creation, but cultivating deep

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understand himself... For the fulfillment of this great trust man was further given a will, so that his acts should reflect God's universal will and law." *Koran*, "*Al Baqarah*" Chapter 2.

respect towards it, on the one hand, and an active involvement in preserving and ennobling it in and through their existential presence and activity, on the other.

It is disheartening to note that the high ideal of simultaneous sanctification of human and the nature is lost on the onward march of Christianity, especially as its members were more and more motivated by materialistic concerns. It is a gradual shift from mutuality to exclusivity and exploitation. From the available biblical 'creation narratives', the dominant view, i.e., the view promoted by those in power, conveniently preferred an exploitative theory, according to which humanity is urged to "multiply and dominate the earth." A new theological interpretation of the whole creation story was offered to usher in *dominion* over the whole of nature, implying the *right* on the part of human individuals to exploit everything in nature to their advantage, even if it meant that nature is destroyed irreparably. The religious licence to dominate and exploit nature for the sake of human welfare produces, gradually, the modern almighty economy in the form of capitalism. In fact, all-enveloping dominion and exploitation are inherent to the capitalist economic theory, as it is single-mindedly intent on augmenting the profits, even if that would mean the destruction of everything else. Eventually, these trends have given rise to a technological revolution and a new civilization that is unmindful of the large scale damages done to nature. Unsurprisingly, the religious outlook of Christianity (particularly the Calvinist theory[8]), especially its renewed understanding of the rights of human beings to conquer nature and to exploit every available resource was reinforced by the subsequent theological interpretations of biblical revelation. Even the final seal of salvation was said to be dependent on the success that a person attains in this world: it was understood on par with capitalist business calculations! Though the above referred theological

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[8]Martin Palmer writes pointedly at the Calvinist brand of Christianity that sustained an attitude of exploitation of nature: "This total dismissal of the vast majority of the world meant that Calvinism was a very successful commercial creed. If no one but the Elect – those predestined by God for glory – was of any importance, then you could use and abuse others as much as you wanted. As you were already assured of salvation, it did not matter what you did to anyone else – your salvation was not affected. From this sprang the sort of ruthless, hardheaded business practices which helped the capitalist world become so powerful." Palmer, "The Protestant Tradition," in *Christianity and Ecology*, ed. Elizabeth Breuilly and Martin Palmer, New York, NY: Cassell, 1992, 93.

interpretation was officially subscribed only by a few Protestant sects, in practice it was shared by many Christians, who were only too happy to open up the new avenues of progress to further their earthly success.

Another factor that had contributed to the degradation of nature is the prime place accorded to the spiritual, and the neglect of the material or natural. Although affirmed as God's creation – which God is said to have found "good" (Gen. 1:31) – the dualistic understanding of reality (affirmed as part of Christian outlook especially through the Platonic-Manichaen theories of Augustine and subsequent 'spiritualisers') had relegated the nature to a secondary status. The primacy of the spiritual, gradually, facilitated a right for every Christian to loath the physical world and to condemn the natural. This world view, coupled with the capitalist tendencies perpetuated in collaboration with the new technologies, in turn, became instrumental in offering complete support to 'tame' the nature for serving the high ideals of the spiritual. It is understood to be a God-given mandate to use the nature and its bounty as human beings wish. This apparently 'affirmative' stand, evolving from a 'spiritualised' understanding of the dualistic world view, has played havoc in Christianity's role in degrading and butchering nature.

It is against this background that we locate (not chronologically) various movements, such as Enlightenment, and modern revolutions, such as French Revolution, American Revolution, etc., paving the way for asserting not only the individual person, but also his or her inalienable rights. Though there were initial suspicion and rejection of such views by religionists, especially those who held the reins, in history we find a gradual acceptance of the Enlightenment values into the life and dogmatic formulations of various religions. Modern interpretations of various sacred scriptures indicate that most of the Enlightenment values are already found in them. Such an attempt to re-orient the teachings of various religions along the line of the primacy of the individual, has simultaneously been complemented by the theory and practice of capitalist market economy, in which the individual's ability to amass as much profit as possible was justified. In the course of time, then, we find many religions supporting the stand of capitalist market economy as the justifiable mode of human life, though its principles seemed to be going against many a section of the human society itself.

Almost at this time we find the free market economy finding inroads into the religiously accepted ways of economic behaviour. The aggressive market trends that were indirectly, at least, backed up by the religionists and the official organs of various major religions in the world tended to push the boundaries of individual rights beyond the permissible limits, stretching them to such extremes as to totally neglect a cosmic vision of life, tending to be egoistic in behaviour and action. One of the catastrophic impacts of this new vision of life along the principles of capitalist market economy has been the unbridled use of natural resources. Even if it were for amassing unjustifiable profits, they had not only an economic justification, but also a pseudo-religious justification, whereby the exploitation of the natural resources continued without any control whatsoever. Nothing needs to be said further as to what is the consequence: social relations as well as ecological relations have been turned upside down, leading to life-threatening practices on the part of human agents and natural calamities and imbalances from the nature.

True, initially, religion was instrumental in helping human beings integrate themselves with nature under the auspices of God or the divine. However, later, certain deviant elements within religion itself initiated an alienation of humans from nature; the natural was pitted against humans in such a way that, finally, they were seen against each other: humans established dominion over nature. This alienation gradually led to yet another foundational alienation: between humans and the divine. Human outcry for total autonomy led the way towards the denial of religion, and the banishment of every religious dimension from human life. These consecutive alienations led humanity to a state of disintegration and disarray.

The speed with which the destruction of nature was carried out over the last two centuries bears witness to the fact that the western civilization has ingrained into it this world vision. The technological craze that is experienced by the contemporary world has its roots in the western thought which wants to control the whole of nature through impersonal instruments that have become the mark of human domination. In fact, generations of western philosophers and theologians (not necessarily Christian believers), inspired by this exploitative model have contributed further in cooking up rational or systematic foundations. The Cartesian dualism, Nietzschean "will to power" (despite his very provocative criticism of the Christian

stand on nature), the Marxian revolution for the redemption of the Proletariat (at any cost), etc., have contributed over the years for re-affirming the western mindset in continuing to subdue and exploit the nature. The widely accepted utilitarian philosophy tended to give momentum to the exploitation originally sanctioned by religions. Among many others, a strong voice heard from among philosophers from the West is that of Martin Heidegger, who insistently called the western civilization to give up the Cartesian model and to return to a new era of 'shepherding' the Being. Care for being, according to him, should necessarily include the whole nature, human beings being only a part of it, though definitely occupying an important role. Such a vision of reality would naturally bring back the western, or an apparently Christian, civilization back on its track. For, "faith, our basic attitude toward life and being, is crucial to how we work and play, how we treat our wealth of resources. If we could develop a faith more holistic, more peace-making, more feminist, more like ancient peoples' sense of Mother Earth's sacrality, we might offer the twenty-first century a new rationale to ease its interrelated crises of world hunger, nuclear arms build-up, and widespread pollution."[9]

In fact, Christian sources themselves are abundant in providing inspiration for such a holistic understanding of nature and reality; what is required is only a re-emphasis, which does not seem to be so easy as the civilization has been glorifying materialistic values against the original integral thrust of the Bible, especially of the New Testament (although in a germinal form). This may be easily traced from the fact that many Christians in the West are said to be officially not practising Christian faith; however, the world view ingrained in their mind does not cease to be different from what was already imprinted on the western psyche in general. Yet, a paradigm shift to reinstate an integral life vision that would mutually accord rightful place to nature and to humanity is the need of the hour.

The negative picture painted above around Christian interpretations and the resulting destructive tendencies in the West, I should say, is not at all exclusive to them; in fact, it is shared by almost all religions, including Hinduism and Buddhism, which are acclaimed to be religions closer to nature and nature worship. Ruthless destruction and exploitation of nature have been unleashed in India and other Asian countries where these

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[9]John Carmody, *Ecology and Religion: Toward a New Christian Theology of Nature*, New York: Paulist Press, 1983, 7.

religions are the majority religions. Even the profound doctrine of Advaita (and its realizable goal of oneness of the whole of reality) and the Hindu ideals of *Vasudaiva kudumbakam*, *ahimsa* and *sarvodaya* (non-violence or holistic creative love and the welfare of all) could not motivate the Hindus to accord nature its proper place in human affairs. Although not many critical and objective studies are available as to the negative impact of religious doctrines of Hinduism and other Asiatic religions upon nature, there are scholars like Thomas Derr, who do not spare any religion from the overall critique on religious ideologies being instrumental in effecting environmental destruction:

> ... if ecological disaster is a particularly Christian habit, how can one explain the disasters non-Christian cultures have visited upon their environments? Primitive cultures, Oriental cultures, classical cultures – all show examples of human dominance over nature which has led to ecological catastrophe. Overgrazing, deforestation and similar errors of sufficient magnitude to destroy civilizations have been committed by Egyptians, Assyrians, Romans, North Africans, Persians, Indians, Aztecs, and even Buddhists, who are foolishly supposed by some Western admirers to be immune from this sort of things.[10]

This points to an all-pervasive corruption of religious foundations (brought about by pseudo-Christian practices) and the inability of almost all religions to motivate their votaries to cater to a healthy and integral attitude towards nature. As a matter of fact, it is the onslaught of materialistic and consumeristic orientations resulting in the enthronement of individualism that has brought about the sidelining and downfall of original religious ideals and the total inability of religions to motivate their faithful. This is being accentuated in the contemporary society by industrialization and uncontrolled craving for the consumption of goods without any regard for the sources and other generations who have a right on the available resources.

The next in the unholy alliance that has brought about catastrophic destruction upon nature is the economy and modern concept of development. Industrial development within the matrix of a capitalist economy, which is intent on amassing wealth even through unjust means of

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[10]Thomas S. Derr, "Religion's Responsibility for the Ecological Crisis: An Argument Run Amok," *World View* 18 (1975), 43.

cutthroat competition, has unleashed the insatiable human cravings. By and large, anything and any person is said to be valuable only in terms of its/his/her capability of being 'exploitable'; if one does not fall in that category, it would be considered 'valueless'. As profit generation basically depends on people's desire, their needs and wants, the market forces have come to such a state of even creating certain wants among the people so that industry/market could produce and sell more and more goods that in no way would be needed by many. So, economic market forces that tend to be dictating the needs of the people are basically functioning on manipulative strategies, but with a single goal: boosting the profits. Although at one time people had engaged in exploiting the natural resources for economic purposes, the extent of damage committed today by various agencies in the name of economic development cannot be attributed to ignorance. Having had a rather clear picture of how unbridled developmental activities and insatiable craving for material consumption affects (and would affect) the nature, the contemporary society has reached a point of no return unless natural disasters force them to do so. Even agriculture, which was at one time considered to be a process of participating in the natural rhythm, is being carried out to cater to the industrial greed, and any artificial method of farming would be welcomed without a thought of further adverse consequences. As the needs and wants of the people at large are pampered up, any amount of production does not seem to be enough. It is natural, then, to exploit the nature, which is indiscriminately expected to match up to human greed: nature is the servant of humanity, which shall be controlled by humans to facilitate the fulfilment of their wants. Thus, ultimately, the attitude of religious persons (referred to in the previous pages) and that of the industrialists and the economists runs on parallel lines. Indeed, they are not different, but the same people whom we approach for our analysis' sake from two different angles, that of religion and economy.

However, if the affairs of life and nature are to be set in order, the market economy needs to be freed from the sheer profit motive, and must be brought under the control of reason and common good. Deforestation, exhaustion of nutrients of soil, chemical residues in the soil, etc., resulting from aggressive agricultural practices to cater to the increasing wants of the people around the globe need to be stopped;[11] they do provide convenience

[11]Entropy, the second law of thermodynamics, indicates that in every energy conversion, any system and it surroundings spontaneously tend toward increasing

to people and profit to the businessmen, but both result in a whole lot of troublesome consequences both for the present and future generations. The present form of capitalist or neo-liberalist economic arrangements unleashes systematic violence against nature's survival which is totally unjust in the way it operates.

> Economics must recognize the *limits* of the ecological system. The earth cannot go on producing more and more. The idea of economic growth and development only means an increase in the ability to grab more of the pie: the pie itself cannot get any bigger. More land devoted to cattle for hamburger meat means less land for tropical forests. To enrich oneself at others' expense is unjust and immoral.[12]

Degradation of the environment should become a major concern of all, and the business firms must be forced by the collective will of the people to stop with those business practices that destabilise the natural equilibrium with an anthropomorphic tilt.

The speed with which the affairs of human world are conducted has, for example, undergone tremendous change while the rest of the world functions the way it used to be (like the difference between email and snail mail in the new electronic world of communication). Human manipulation of every segment of nature to suit exclusively the human world has changed the natural matrix and its horizons unimaginably. Globalized economy is instigating every segment of its operation to match the new (astonishing) speed, whether it is at the level of capital investment, labour power, tapping of natural resources, or even the conversion of natural elements into commodifiable entities. While the pace of nature and everything in nature continues to be the same, the global market economy seems to be sustainable only at an unnatural (and inhuman!) pace. As speed has conquered human domains (e.g., computing) everything and everyone else who is incapable of coping with the ever increasing speed of the multi-national companies (those market giants who, in fact, tend to control every facet of human and natural dynamics through their subtle economic and political strategies) are either being side-tracked or being manipulated.

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distortion. Even environmental-friendly approaches in generating or converting one or the other form of energy must be oriented to low entropy; lest the system will become unstable to such an extent that it will annihilate itself.

[12]Freda Rajotte and Elizabeth Breuilly, "Treatment for the Earth's Sickness: The Church's Role," in *Christianity and Ecology*, 103.

Nature and everything natural fall into this latter category of the mercilessly-manipulated, which are not accorded even the right to exist by themselves: they all are accorded value only in terms of their place within the total market spectrum; if they do not fit into the market economy's scale, they are not even accorded existence!

Our analysis indicates that the capitalist economic orientations are at the root of a lot of problems that haunt the environment. Even after realizing that its economic orientations are leading the creation to its own destruction, its insistence on augmenting profit still presses ahead faster and nature-denying modes of production. Arran E. Gare looks at this phenomenon from a global perspective where any capitalist economic agent is intent on continued exploitative strategies:

> Capitalism has evolved into a differentiated system which now envelops the globe, and in this system, massive oppression and exploitation of vast regions of the world by the core zones of the global economy are inevitable. Individual states are part of a system of states situated within this differentiated economy, engaged in a struggle to augment their own power and to preserve or change the status of their region within the global system, to exploit other regions, to resist exploitation or to suppress local populations to facilitate exploitation by other regions.[13]

This refers to the way 'developed'/industrialized/North nations continue to exercise control over the rest of the world economies, primarily focussing on a very narrow understanding of welfare. Unfortunately, the highest ideal of a society, the common good, is interpreted individualistically, which in turn paves the way for a subtle and total neglect of the whole of the society.

Globalization, the neo-liberal face of capitalism, along with its promises and threats, has brought about a disorientation among the people at large. The glittering side of development and the surge of the middle class and the upper middle class onto the heights of 'ever booming' economy, leave the people clueless in deciphering what exactly is to be chosen: should they give up an all-promising career and opportunities for the 'outmoded' environmental concerns, which would only adversely affect the prospect for better business, better economy, and better pay-packets? Globalization introduces an attitude among the growing economies (like

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[13]Arran E. Gare, *Postmodernism and the Environmental Crisis*, London: Routledge, 1995, 98.

India and China) that they themselves are advancing at a faster pace that cannot be matched by any other, thus apparently assuring a place with the already developed. The infused pride of these middle class, boosted by the politicians who are intent on cashing in every opportunity for their advantage and the 'almighty' media that does not miss any chance for making private economic mileage of anything that takes place on the face of the earth, blinds these nations to involve in indiscriminate use of the resources. Their sole aim is economic growth. The hidden economic and, hence, human and cosmic tragedies are either not understood or are conveniently overlooked for temporary benefits. They, however, easily forget that "nature shrinks as capital grows."[14]

Local and international[15] political structures also play an important role in degrading nature and creating ecological imbalances. In fact, it is these political agents who are responsible for according force to pseudo-religious as well as market forces in their attempts to exploit and destabilise natural resources. If we critically look at the contemporary political ideal of democracy, most of the democratic governments are said to be market-effected new face of capitalism.[16] Even the left-led democratic governments

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[14]Vandana Shiva, "Recovering the Real Meaning of Sustainability," in *The Environment in Question*, ed. D. Cooper and J. Palmer, London: Routledge, 1992, 187-93.

[15]Nations of the world should unite, not merely under the auspices of the ineffective United Nations. The UN is a visible sign of international disarray resulting from the 'dominion' exercised by the so-called industrially developed nations. From the perspective of a safer (environmentally and politically) world, which was the primary objective of forming the UN, at least as it was projected to the rest of the world, we should come to a more united and egalitarian set up. This needs the basic and equal recognition of all member nations. In this regard, India, or any other nation, should stop lobbying for a permanent seat in the UN Security Council, but should strive hard to establish equality and justice among all member nations and for the abolition of any privileged position enjoyed or claimed by member nations. To my mind, the present system of veto power enjoyed by a few nations is almost on par with the caste system of Hindu society, but now practised globally by the *industrialised and globalized* 'brahmins'.

[16]Politics has been invaded by market economies. Along this line, Gare opines: "At present, government policies and programmes are overwhelmingly formulated on the basis of neo-classical economic theory, in which the economy is treated as a closed system, driven by greed, tending toward equilibrium, and in which nature is

have turned out to be puppets in the hands of national or multi-national business concerns.[17] When it comes to the issues of environmental devastation effected by industrial and business practices, politicians tend to be siding with unbridled development as that would temporarily satisfy the populace, which would assure them continued governance, even if that would eternally impoverish the nation in terms of natural resources and country's wellbeing. This presents us with a very pathetic situation. Putting together lack of effective political will and the profit-driven market economy as the key responsible factors that do not relent in the fast-track mode of production and consumption, R. J. Johnson holds that "the solution of those problems is difficult because the only institutions within which the necessary collective action could be mobilised exist to promote the interests of that mode of production."[18] Therefore, an environmentally sustainable global civilization has to emerge through a definitive commitment among the local population, which can overcome the impasse initiated by the parochially motivated and economically-crippled 'democratic' governments that define their ends only on political grounds.

A common factor that has unleashed adverse impacts of religion, economy, and politics upon environment is the individualistic attitude that runs through the inner fabric of our society. Subscribing to one or another religion and its universal principles of altruism and inter-relatedness do not seem to be successful in fundamentally altering the economic and political individualism. It would only open up the highways to disasters and alienation. However, the cosmic system exists and functions on an intricate networking of all its constituent elements. Human agency shall partake in this integral networking in a meaningful manner by consciously involving in it, and enhancing the same for the sake of the common good. It would succeed in transforming and motivating the human race to a harmonious existence if all would fulfil their cosmic responsibility both at the individual and collective levels. For, it is the inner harmony experienced at the individual levels that can be extended to the wider horizons and the outer

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treated as nothing but a passive resource." Gare, *Postmodernism and the Environmental Crisis*, 154.

[17]The Communist-led West Bengal government in India is the best example.

[18]R. J. Johnston, *Environmental Problems: Nature, Economy and State*, London: Belhaven, 199.

world. Indeed, the inner harmony can be realized only if religious dimensions of human existence are taken seriously.

There is need for a new perspective, a new philosophy, if the biosphere should continue to exist and exercise its prime role: ecology shall not be seen as a luxury, but an imperative. Human approach to any reality, including religion and religious affairs, must be primarily infused with a vision that emerges from *oekos*. It calls for a radical *metanoia*, a transformed vision of life in which the whole nature would assume the status of a sanctuary, and human response will be one of taking responsibility in the form of offering respect and reverence to the sanctuary. Nature shall no more be a machine that supplies raw materials to the industry but the life-giving and life-affirming matrix under the over-arching creative and protective involvement of human beings. From a practical point of view, this can be attained by a concerted effort of religions and the states by investing in the education of the younger generations. The crippling narrow technological vision that permeates the whole gamut of education must give way to a holistic wisdom. Religion, economy, and the state – great institutions that encompass human affairs in the contemporary society – should be capable of enhancing human existence to such great levels of consciousness that human beings would become catalysts in leading a life that is totally integrated with nature.

It is with these hopes that the *Journal of Dharma* has undertaken the present issue on "Ecological Concerns." Against the background of the present day ecological crises unleashed by modernist and industrial civilisation, A. Pushparajan proposes the relevance of Gandhian eco-vision in conceiving a "development through appropriate technology." In another article on "Environmental Crisis and Religions," Jose Kalapura affirms that "as religion exists in nature and nature sustains human life, both religion and nature should be inescapable parts of human existence." From an eco-pneumatological reading of Raimon Panikkar, Brad Bannon affirms that "the time has come for a radical *metanoia* in which we begin to recognize the Earth as caretaker of us and of the countless organisms that are equally cared for by this Mother Earth." "Tapovanam and Eco-surroundings," by Jojo Parecattil, is an attempt to recapture the age-old cultural paradigms of Indian classical literature to infuse the contemporary world with deeper respect for nature. Radharani P. has made a study on 'Tree worship' as is prevalent within Hinduism and affirms that, by and large, it was

instrumental in imparting better respect for nature. K. P. Sasi and S. M. John Kennedy approach the issues related to the natural resource of water from ideological and existential perspectives.

Indeed, a radical spiritual revolution has to take place if our consciousnesses were to be transformed from the present mode of exploitation of nature to that of collaborators and partners with nature. The individualistic consciousness need to be supplied with a communitarian consciousness, in which justice would take into account not only human point of view, but also the cosmic. In fact, emergence of a cosmic consciousness is essential if we were to give shape to a sustainable eco-sphere. If religious ecologies had been so influential among the votaries of different religions, even to the extent of alienating them from the environment and in furthering the destruction of the nature, what we need today is, again, alternative religious ideologies, but with a different orientation and healthy/holistic perspective. Preference for religious ecologies over secular ones results from my conviction that religion is still a vital force in motivating people into action by effecting a self-transformative life vision. In fact, affirmative action with a view to bring about a better world to live in can be facilitated by the concerted efforts of all cosmic forces, in which human beings have to play the lead role. Future will not be bleak if human conscious efforts are underway in holistically infusing religious ethos into economical and political spheres. Nothing exists by itself or for itself; cosmic networking is an undeniable fact, which we human beings shall effect in this universe through our unceasing conscious efforts. So, let me conclude with the closing hymn of the *Rgveda*, an aspiration for peace and harmony attained in the realization of human integration and cosmic communion:

> United your resolve,
> United your hearts
> May your spirit be at one!
> That you may long together
> Dwell in unity and concord (X.191.4).

Saju Chackalackal
Chief Editor, JD

Journal of Dharma 31, 4 (October-December 2006), 407-436

RELEVANCE OF GANDHIAN ECO-VISION

A. Pushparajan♦

1. Introduction

The relevance of M. K. Gandhi has been discussed ad-nauseam by various people in a variety of ways. For a few people today it has become a fashion to question the relevance of Gandhian thought. There is, however, an area which Gandhian relevance can never be disputed about. It is his ecological concerns. Even those who think that Gandhi is totally irrelevant and useless will have to accept his eco-vision.

Obviously Gandhi was not an academic thinker in the professional sense. He had not presented an eco-vision as such in a theoretical form. Although his writings run up to 100 volumes of nearly 500 pages each, they are mostly fragmentary, context-oriented, and occasion-centred. So, whatever he spoke or did in reference to ecological concerns are interspersed in his copious writings, and submerged in the numerous contexts. It is, indeed, a treasure-hunting task to find out the relevant portions from among the scattered writings of Gandhi and synthesize them so as to form and formulate the Gandhian eco-vision.

The severe ecological problems that affect us today are precisely what Gandhi predicted several decades ago. Had the world listened to his warning already at that time, we would not have got into such a muddle in which we are found today. It is against the background of those fears and concerns that the emergence of Gandhian eco-vision becomes meaningful and urgent. Therefore, the first part of this paper gives a brief description of the varied environmental problems that affect humanity today.

Profound thinker as he was, Gandhi was concerned more with tackling the root cause of the problems. In his opinion, the very approach of modernization and industrialization was wrong. For all the malaise of ecological distortions and deterioration, it was industrialization-regime that was the real culprit. Hence, the next part of this paper deals with reasons Gandhi gives for considering it so. The recent statements made by world

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scientists resonate with the same themes and feelings of Gandhi. Hence, the standpoints of present-day scientists as well as the Gandhian viewpoints are presented in this part of the paper. Then, in the light of the considerations, I try to make a synthesis of Gandhian insights and practices regarding the ecological concerns and formulate the Gandhian eco-vision.

2. Context of Ecological Crisis

The variety of environmental problems that we face is too evident to be elaborated here. However, a brief description is necessary for our purpose.

- The destruction of tropical forest is happening so quickly and recurrently that in the last 200 years alone 19% of forest area of the earth has been lost from the total area of just 33 per cent. It is like two third of skin is peeled off from an animal.
- Soil erosion owing to desertification of lands and torrential flow of waters.
- The increasing diminution of energy resources like the coal and petroleum products, and other fossilized resources.
- Depletion of Ozone layer (too universal to be ignored today) is quickened.
- The impurity of air is ever growing: The excessive emissions of the automobiles massive fume from the industries like textile mills, cement plants, steel plants, chemical plants, fertilizer set-ups, thermal plants, etc., have impaired the role of plant kingdom to purify air so much it is beyond the capacity of trees to keep the balance of purified air
- Impurity of water even causing new deceases like the Mina Mata disease of Japan, mercury released and paper mills' effluents found their way in the shallow parts of eastern coast of Japan (the mercury compounds like methyl mercury and diethyl mercury got established in the fish and the sea weeds).
- Infertility of soil spreading fast because of over use of urea, chemical fertilizers, and pesticides like DDT (Dichloro Diphenyle and Tricholoro), ethane, etc., sprayed on vegetables, fruits, oil seeds, and cereals.
- Salinity and impotability of water as a result of over use of chemical fertilizers or effluents from heavy industries mixing with river waters and sewages of big cities
- Acid rain: The toxic gases are so overspread in the atmosphere that when they get moisturized by rain water they turn out to be acid and fall on the

earth as acid rain. For example, sulphar dioxide over the vast spread of lakes turned out to be sulphuric acid and, thus, has caused death of numerous fish.

- Water logging, siltation of water, and sedimentation mostly arising out of big dams are on the increase.
- Extinction of many species: Due to the induction of hybrid varieties of vegetables, paddy crops, and genetically modified varieties of rice, etc., the local paddy varieties are getting vanished.
- Extermination of wild life happens mainly because of too much of disturbance of forest habitat.
- Toxic wastes, such as non-biodegradable materials like plastics, synthetic polymers, or the by-products of the nuclear plants dumped into the earth or ocean not only contribute to the accumulation of wastes, thereby breaking the cyclic process of life but also poisoning the bio sphere.
- The most common problem is the pollution[1] of all sorts. Air pollution is so intensively prevalent as to produce acid rain. Water pollution, owing to the numerous industries on the banks of rivers which pass their toxic effluents, is so much that waters of the 'holy' rivers of Ganga or Kaveri are no more potable. Mina Mata disease is a glaring example of pollution of water even in mighty oceans. Soil pollution is such a common thing today that many of our fertile fields have not only lost their fertility but also the underground water is not pure to drink either.
- The Green House Effect: The excessive use of fossil fuel has added to the atmospheric concentration of terrace gases like carbon dioxide, methane, and nitrous oxide, which, in turn, prevent the refraction of heat from the earth at night and has created global warming.

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[1]It is important to specify the technical meaning of the term 'pollution'. It is not simply any dirt that is called pollution. Nature has the miraculous capacity to dissolve or dissipate a dirty material and, thus, to clean up the environment. However, when the dirt, often the by-product of human activity, gets accumulated to such an extent that it exceeds the capacity of the ecosystem to handle it by dissipating or dissolving then only it is said to be pollution. For instance, if a group of four persons smoke a cigarette each in the open air, dirty fume is dissipated in the air and gets lost. If, on the contrary, the same group of four persons smoke in a closed room, anyone who enters the room may even get suffocated. The simple reason is that the dirty fume emitted in the room is too much to be dissipated or diluted or dissolved by the limited amount of air available in the room.

- Global Warming: Already in the year 1869 a scientist by name S. Arrhenius mooted the principle of global warming in his paper, "On the Influence of Carbonic Acid in the Air upon the Temperature of Ground." It took over a century for it to gain ground. In the late 1980s and early '90s, it was found that the earth's air temperature had warmed over the past century, because of the emission of increased carbon dioxide. But today global warming is established "with a near consensus among the world scientists."[2] For, the recent Report by Intergovernmental Panel on Climate Change (IPCC-2007)) prepared by the world scientists and adopted by representatives of 113 world governments has given a growing body of scientific evidence for global warming. Among the findings of the scientists the Arctic region with glaciers is shrinking and, therefore, the Artic Ocean could largely be devoid of ice during summer later in the century. It means that hot days, long summers, heavy downpours, hurricanes, and storms will be more the rule than exceptions in the coming years.

The merit of Gandhi is that he forewarned precisely this catastrophe which the scientists fear today. More interesting is that the cause of the problems as well as the solution to the problem suggested by the scientists today is exactly what Gandhi suggested during his time.

3. The Cause of the Crises

The ecological disasters mentioned above are all what Gandhi forewarned many years ago. When he predicted them during his life, people did not appreciate him. Rather they dubbed him as prophet of doom. They criticized him as one who was dragging humanity to bullock-cart civilization. However, today there is a greater awareness among people that the varied environmental problems are not sporadic or freak events of nature. There is a human factor involved in the ecological crises. They are the results of the developmental activities. Gandhi was perceptive of the same even during the early decades of the 20th century. He objected to development with respect to both of its dimensions: 1) technological and 2) economical. It is striking that scientists express opinions which correspond to the very same objections Gandhi gave years ago. Hence, it may be

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[2]James Kanter and Andrew C. Revkin, "World Scientists Near Consensus on Warming," *The Hindu* (Bangalore), January 31, 2007, 19.

interesting to glance at the opinions of the scientists first, and then see how best they corroborate Gandhi's observations.

3.1. The Technological Development

It is the unanimous opinion of the world scientists that modern science and technology have exerted an undue influence upon the eco-systems both local and global. It is said to be undue because it has exceeded the sustainable limits of the Earth's capability. The first wake up call from the scientific world came in 1972, when the "Club of Rome" published the book *Limits to Growth*[3] authored by renowned scientists Donella H. Meadows, Dennis L. Meadows, Jergen Randers, Jørgen Randers, and William W. Behrens. Then, in the year 1993, Donella H. Meadows, Jergen Randers, and Dennis L. Meadows published *Beyond the Limits* as a 20 year update on the original material. The most recent updated version was published by Chelsea Green Publishing Company in 2004 under the title, *Limits to Growth: The 30-Year Update*.[4] The kind of limit is seen firstly in terms of the fund of energy resources (the non-renewable resources) exemplified by an impending crisis in petroleum supply, the coal, oil and gasoline, on which modern scientific technology largely depends. Billions of years have taken for formation of these resources. If one draws just a litre of petrol from the earth now, one has already used up what Nature has been processing for millions of years. Or, one has to wait for a million years more in order to get a litre of petrol formed. But much of them have been exhausted within the last two hundred years alone. How, then, could it go on for ever?

The second kind of limitation the scientists describe is in reference to the functional capacity of the ecosystem. The earth's capacity for life is set by the quantity of sunlight reaching the earth's surface as well as the rate of replenishment of renewable resources such as wood or water. This capacity gets either destroyed when its renewable resource is used faster than it can be regenerated or distorted by pollution. The Report by Intergovernmental Panel on Climate Change (IPCC-2007) states: "It is now scientifically substantiated that we have lost for ever a great deal of our tropical forests,

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[3]"Limits to Growth," *Wikipedia: The Free Encyclopedia*, http://en.wikipedia.org/wiki/Limits_to_Growth 07-02-2007 [Online].

[4]"Limits to Growth," *Wikipedia* [Online].

glaciers, decertified lands, species."[5] The same Report further states that rising greenhouse gases and temperatures could soon overwhelm the natural systems that normally keep their levels in check. About half the 24 billion tons of carbon dioxide generated by human activity each year are absorbed by forests and oceans. The Report of the IPCC further acknowledges the role of human hand behind global warming with 90 percent certainty, as against its Report (2001) which placed a 66 per cent onus on the human factor.[6]

It is not individuals' acts that have imperilled the environment. It is rather the modernist and industrial civilisation that is the real culprit. The present-day ecological crises indicate that the very approach of modern science and technology was wrong. The IV Report of the IPCC has made scientifically confident statements that, in making choices over the past couple of centuries, human beings have made many mistakes – mistakes that cannot be corrected. It says, with enhanced confidence, that it is the lifestyles chosen by the people since the industrial revolution, defined by fossil fuel use that has added to atmospheric concentrations of GHGs, which, in turn, have accelerated global warming. The cumulative effect of GHGs released by people for attaining welfare will be the depletion of our collective natural wealth, which can in the extreme case even lead to the extinction of life on earth. Whatever GHGs have been emitted over the past 100 years by the Annexe I countries[7] are already affecting our lives now. With more emissions to come due to the developmental projects by the Annexe II countries[8] we are destined for catastrophe.

What is done is already done. But at least care must be taken not to add further impurity into the already polluted atmosphere. According to Richard Betts, leader of the research team at the Met Office's Hadley Centre for Climate Prediction, "the next 10 years are crucial." For, "in that decade we have to achieve serious reductions in carbon emission."[9]

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[5]Joyashree Roy, "Globally Warmed Up Questions," *The Indian Express* (New Delhi), 14- 02-2007, 10.

[6]"Climate Concerns" (Editorial), *Deccan Herald* (Bangalore), 07-02-2007, 10.

[7]The First world countries are listed in the Annex I.

[8]The Third World countries are listed in Annex II.

[9]Cited in Jonathan Leak, "We Have Just 10 Years to Save the World: Warn Scientists," *The Times of India* (Bangalore), 29-01-2007, 17.

It is in the context scientists' description of the crisis as well as their prescription of the remedy that Gandhi's critique of modernization is greatly significant. Already in the year 1889, Gandhi, after reading a book *Civilization: Its Causes and Cure* by Edward Carpenter, began to publish his first writings criticizing the approach of the technological developments of modern civilization in his *Journal of Vegetarian Society*. Later, his manifesto, *Hind Swaraj Indian Home-Rule* (1909), gave a decisive call to reject industrialization. It describes the dismal picture the industrialized civilization would bring in. The following passage will suffice as an example:

> For ... industrial society was selfish, competitive, and *grossly destructive of nature*. The distinguishing characteristic of modern civilization was infinite multiplication of wants. To satisfy it, one has to forage far and wide for new materials and commodities. I wholeheartedly detest this mad desire to destroy distance and time to increase animal appetites and go to the ends of the earth in search of their satisfaction. If modern civilization stands for all this, and I have understood it so, I call it satanic.[10]

This, in turn, means excessive interference with Nature which is wasteful.

> When we, through greed or false notions or a wrong sense proportion, interfere with nature hoping to obtain short-cuts, we generally end up by being wasteful. Nature does not believe in short-cuts. The mills of God grind slowly. Hence in our hurry, we often bring destruction on our heads and we imagine such quick results to be a sign of progress.[11]

A perceptive thinker as he was, Gandhi clearly foresaw the wrong direction in which the modern industrial civilization was set. Its values were short-lived, as against the classical traditional values which had withstood the test of time. Hence, by insisting on the age old traditional values, Gandhi tried to withhold the values that went under the name of modern civilization. "Surely modern civilization is not millennia old. We can almost give its birth in exact date. If I could do it, I would most assuredly destroy or radically change much that goes under the name of modern civilization."[12]

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[10]M. K. Gandhi, *Hind Swaraj: India's Home Rule*, Ahemadabad: Navajeevan Publications, 1962, 61-62, emphasis added.

[11]*Harijan*, April 13, 1947, vol. XI, 104.

[12]*Harijan*, April 13, 1947, vol. XI, 104.

Today's scientists are also decisive in finding fault with the modern approach to life. The IPCC has clearly acknowledged that the developmental projects are the major cause of the climate change in the atmosphere. However, they seem to conceive the environmental values as distinct from and independent of moral values. But Gandhi lamented modernity because it was all set against the moral values of old. Accordingly, his eco-vision consists in seeing the environmental and the moral as one integrated whole.

> This land of ours was once, we are told, the abode of the gods. It is not possible to conceive gods inhabiting a land which is made hideous by the smoke and the din of mill chimneys and factories and whose roadways are traversed by rushing engines, dragging numerous cars crowded with men who know not for the most part what they are after, who are often absent-minded, and whose tempers do not improve by being uncomfortably packed like sardines in boxes and finding themselves in the midst of utter strangers who would oust them if they could and whom they would, in their turn, oust similarly. I refer to these things because they are held to be symbolical of material progress. But they add not an atom to our happiness.[13]

Just because Gandhi objected to modern civilization it should not be misconstrued that he was objecting the benefits of modernity. What he insisted was that it was not spiritual enough as our tradition was. Hence, he said that while we try to modernize ourselves we should equally concentrate on the upkeep of spiritual values as well.

> If India is to live and fulfil her spiritual mission among men, she must modernize itself... Let us unhesitatingly and energetically assimilate the modern industrial methods... But along with that we must practise spirituality intensely, create a mighty spiritual idealism in the mind of the nation and a great love for the country so that on the wings of them we may cross over the dark valley of modernism in which the west is sadly groping. Without spiritual idealism, modernism will spell a speedy ruin.[14]

People, like Jawaharlal Nehru, were keen on introducing massive development in India. They thought that the evils of mechanization were all

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[13]Shriman Narayan, *The Selected Works of Mahatma Gandhi*, Ahmedabad: Navjivan Publishing House, 1968, 354-5.

[14]*Young India*, 25.7.1929, vol. XI, 244.

due to capitalism only. Hence, they thought of socialism as a remedy to it. Gandhi, however, argued against such a view: "Pandit Nehru wants industrialization, because he thinks that if it is socialized, it would be free from the evils of capitalism. My own view is that the evils inherent in industrialization and no amount of socialization can eradicate them."[15] Still others, dazzled by the grand success of modern machinery, wanted to go after the modernization process. However, Gandhi was very clear in his stand.

> I refuse to be dazzled by the seeming triumphant of machinery and uncompromisingly against all destructive machinery. But simple tools and instruments and such machineries as saves individual labour and lightens the burdens of the millions of cottages, I should welcome.[16]

Gandhi clarified his position further thus:

> What I object to, is the graze for machinery, not machinery as such. The graze is for what they call labour-saving machinery. Men go on 'saving labour', till thousands are without work and thrown on open streets to die of starvation. I want to save time and labour not for fraction of mankind but for all. I want the concentration of wealth not in the hands of a few, but in the hands of all. Today machinery merely helps a few to ride on the back of millions. The impetus behind this all is not that the philanthropy to save labour but greed. It is against this constitution of things that I am fighting with all my might.[17]

Further, in line with the scientists' observation about pollution, Gandhi had something to say already during his time. Regarding pollution at the personal level, Gandhi said:

> I can assist Nature, for instance, by getting rid of the effective cause of the impurity, so that more of it does not accumulate. That is to say, if I stop eating for the duration of the illness, thus preventing the ingress of further impurity; and if I exercise in fresh air, I shall also start ejecting the impurity through the skin. That this is the golden rule for keeping the body free of disease, every one can prove for himself.

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[15] *Harijan*, September 29, 1949, vol. XIII, 299.
[16] *Young India*, 17.6.1926, vol. VIII, 218.
[17] *Young India*, 13.11.1924, vol. VI, 378.

> Only, the mind must be kept in a stable state. One who reposes true faith in God will always act in this fashion.[18]

Gandhi also insisted upon avoiding pollution at the environmental level too:

> During my wanderings nothing has been so painful to me as to observe our insanitation throughout the length and breadth of the land. I do not believe in the use of force for carrying out reforms, but when I think of the time that must elapse before the ingrained habits of millions of people can be changed, I almost reconcile myself to compulsion in this the most important matter of insanitation. Several diseases can be directly traced to insanitation. Hookworm, for instance, is such a direct result. Not a single human being who observes the elementary principles of sanitation need suffer from hookworm. The disease is not even due to poverty. The only reason is gross ignorance of the first principles of sanitation.[19]

Summing up the present day position regarding industrial development, the world scientists' Report (IV IPCC-2007) has clearly established that whatever GHGs have been emitted over the past 100 years by Annex I countries are already affecting our lives now. It has further acknowledged that if there were to be more emissions to come from both Annex I and Annex II countries, it is bound to result in a catastrophe. So it calls for the reduction of GHG emissions.

But in reference to the question who bears how much of the responsibility for reducing GHG emissions, the UN framework has adopted in principle that the responsibility will have to be differentiated. The Stern Review Committee reiterates the view. Surprisingly, Gandhi spoke of Europe as having more responsibility for the malaise of industrial development as early as in 1925. After pointing out numerous civilizations such as those of Rome, Greece, Babylon, Egypt that perished because of their misdeeds, he forewarned Europe with a hopeful note:

> It is good to have faith in the natural. I live because I have that faith... What may be hoped for is that Europe, on account of her fine and scientific intellect, will realize the obvious and retrace her steps and from the demoralizing industrialism, she will find a way out. It will not necessarily be a return to the old absolute simplicity. But it will

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[18]M. K. Gandhi, *Collected Works of Gandhi*, New Delhi, Publication Division, Government of India, vol. XI, 435 (Henceforth the title will be abbreviated as *CWG*).

[19]*Young India*, 19.11.1925, vol. VII, 399.

have to be a re-organization in which village life will predominate and in which brute and material force will be subordinated to the spiritual force.[20]

3.2. The Economic Development

The second major cause of today's environmental problems is the so-called economic development. In particular, the market economy is for the most part responsible for the over-exploitation of the Earth's energy resources. For, consumption of non-renewable mineral resources and fossil-fuel energy resources has been indispensable for economic development. Today we are in a position to recognize the eventual depletion of those resources as a real possibility. The advanced countries, which are consuming several times more resources per capita than the world average, must acknowledge their responsibility and clarify their intentions to convert their economic systems to minimize resource and energy consumption. Already during his time Gandhi thought that the inner mechanism of capitalism and its trend to exploit the natural resources would lead to globalization of approach which, in turn, would result in devastation of the global environment. Hence, Gandhi observed:

> Industrialism is, I am afraid, going to be a curse for mankind. Exploitation of one nation by another cannot go on for all time. Industrialism depends entirely on your capacity to exploit on foreign market being opened to you, and on the absence of competitors. The future of industrialism is dark. England has got successful competitors in America, Japan, France and Germany. It has competitors in the handfuls of mills in India, and as there has been an awakening in India, even so, there will be an awakening in South Africa with its vastly richer resources – natural mineral and human ... and in the course of a few years the western nations may cease to find in Africa a dumping ground for their wares. And if the future of industrialism is dark for the West, would it not be darker still for India.[21]

Now we know for certain that capitalist economy in its garb of globalisation is, in fact, accelerating the process of denudation of nature. Nature has been a mother to us all along, giving whatever we need. But globalisation destroys the very mother just like the traditional farmer killing the very bird

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[20] *Young India*, 6.8.1925, vol. VII, 273.

[21] *Young India*, 12.11.1931, vol. XIII, 315.

which was giving the golden egg. That it is really so may be substantiated by enunciating inner dynamics of the market economy which lies in the law of supply and demand. There are two portions in the law of supply and demand. Both the laws actually enhance the selfishness deep down in the human, elating the selfishness of the producer as well as that of the buyer. It is, indeed, the enhancement of selfishness of humans that is the root cause of destruction of the Mother Nature. That this is so may be explained by analysing the functioning of the two portions of the same law.

First, the law of supply[22] says that higher the price of goods the more will be the incentive to the producers to produce and supply in the market. Lower the price less will be incentive for the producer to make them available in the market. If the cost comes down the marketer would hoard up the goods and supply them less and less and waiting for an opportunity for the price to go up so that he could make a lot of profit.

Then, the implication of such a law, however, is that the value of goods is adequately signalled by the prices, not by their intrinsic worth. The goods are valuable, at least from the standpoint of the producer, not for their own sake but because of the price that producer would like to have. As a result, even the most necessary things for survival like air and water have become a marketable commodity. Almost every major culture considers as 'basic needs' only three things: food, clothing, and shelter. However, even a slight reflection reveals that they are not really the most basic needs for human survival. One can survive for several days without food, and many more days without clothing and shelter. What is fundamentally required for life are water and air. So, they are really the most basic needs. Without oxygen one can't live even for a few minutes. Still, if water and air are not included in the list of basic needs it is only because they have been provided by Nature bounteously and profusely. It is precisely these things that are being marketed today.

In other words, Nature is considered merely as a pool of resources for profit making business or simply as an object to be utilized by humans. Nature is no more regarded a well-designed system of which we are only a part. We are what we are only because we are part of the system as a whole. We are taking nourishment from Mother Nature. If we cut ourselves away from Mother Nature and are keen on making profits at the cost of the

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[22]For detailed analysis, one may usefully refer to A. Pushparajan, "The Market System Destructive of the Eco-system," *Theology for Our Times*, 4 January 1997, 69-71.

copious provisions of Nature, then we are rootless and ruthless. Therefore, we are going to be doomed. Nay, the devastating tsunami of December 2004 in the region of South East Asia, the numerous hurricanes, cyclones and floods that affected the USA and Europe repeatedly in the recent times are but a few instances of Nature's act of overhauling process. To put it in the words of Gandhi, "let them remember that nature is the finest physician. They may be sure that nature is repairing what man has damaged. Nature appears to have become powerless when man continuously hampers her. Then she sends death, her last and peremptory agent to destroy what is beyond repair, and provides a fresh garment for the wearer."[23] The many ecological disasters listed up in the first part of this paper are nothing but different facets of the doom that the market economy has led us to.

Secondly, the law of demand says: higher the price less will be the demand. To illustrate it, suppose a book is priced Rupees 500, only a few people are likely to buy it. But if the same thing is priced Rupees 70, many would buy it. Thus, it means: higher the price, less will be the goods demanded; lower the price more will be the goods demanded. However, no producer is going to sell his goods at a price lower than the real cost. But if the real cost of production is higher it is going to be less demanded by the people. This dilemma is solved by the market economy by introducing large scale production. By this process the producer is enabled to lower the price and, at the same time, to make a profit as well. Suppose the total cost of production for a single book is Rupees 100, including royalty, paper cost, printing cost, labour cost, travel cost, and transport cost, etc. Now, for producing 100 books, only the paper cost will be additional. The printing cost, time spent, the travel cost, transport cost, and royalty, etc., will be relatively the same. That is, the actual cost price of each copy of the book will be far less than the cost involved in producing a single book. It may be around just Rupees 30. That means the profit would be Rs. 40, if he fixes to sell a single copy of the book even at Rupees 70. Thus, mass production of books is the only way to reduce the price and at the same time make a profit for the producer. But, then, the implication is excessive exploitation of the natural resources. In case of fund resources like coal, petrol, and natural gas, nature is put on a stress because they are limited and non-renewable.

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[23]D. G. Tendulkar, *Mahatma*, New Delhi: Publication Division, Govt. of India, 1952, vol. IV, 20.

Thus, both the laws of market economy ultimately enhance the selfishness of people and make their wants appear as needs, which, in turn, lead people to indulgences, on the one hand, and excessive exploitation of natural resources, on the other. Hence, in Gandhi's opinion modern economic system is satanic. As against it, then, Gandhi proposes the traditional goal of voluntary poverty as only alternative to remedy the situation:

> We notice that the mind is a restless bird; the more it gets the more it wants, and stills remains unsatisfied. The more we indulge our passions the more unbridled they become. Our ancestors, therefore, set a limit towards our indulgences...We have managed with the same kind of plough as existed thousands of years ago. We have retained the same kind of cottages that we had in former times, and our indigenous education remains the same as before ... not that our forefathers did not know how to invent machinery. They knew that, if we set our hearts after such things, we would become slaves and lose our moral fibre. They, therefore, after due deliberations decided that we should do only what we can do with our hands and feet. They saw that our real happiness and health consisted in a proper use of our hands and feet. They further reasoned that large cities were a snare and a useless encumbrance and that the people would not be happy in them, that there would be gang of thieves and robbers and prostitutions and vice flourishing in them and that poor men would be robbed by rich men. They were, therefore, satisfied with small villages...The common people lived independently and followed their agricultural occupations. They enjoyed true home rule.[24]

The contemporary phase of economic development is obviously globalisation. It is nothing but an innocuous name for the hidden agenda of the Western nations compelling the developing nations to liberalize their policies, permit privatisation of business, even making structural adjustments, programmes unmindful of the havoc done to the global environment. This is, in other words, sheer exploitation of nations by nations. This is precisely what Gandhi predicted way back in 1931: "It is exploitation, I will not say, of the weaker nations by the stronger but of

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[24]M. K. Gandhi, *Hind Swaraj, India Home Rule*, Ahemadabad: Navajivan Publishing House, 1962, 61-62

sister nations by sister nations. My fundamental objection to machinery rests on the fact that it is the machinery that has enabled these nations to exploit others."[25]

4. Gandhi's Positive Contributions to Eco-Vision

Apart from Gandhi's critique of development as the root cause of ecological disaster, Gandhi is better known for his positive contributions to the sustainable development which, in turn, would go a long way to sustain the bio-health. We shall now turn to these methods conceived and practised by Gandhi for promoting a sustainable eco-vision.

4.1. Voluntary Reduction of Wants

Modern economics induces people to crave for artificial, luxurious, and pompous living. The very thrust of industrialization is to tempt people to indulge in multiplication of wants. Unless we are cautiously aware of this, we may fall prey to it. This is the core of Gandhi's perception of the modern civilization. This is explained by J. B. Kripilani a close associate of Gandhi:

> Nature has produced materials sufficient enough to meet man's needs. But factory owners started exploiting nature in unnatural ways. Thereby they have created 'illth' in the place of 'wealth'... When money becomes the motive for practising medicine, he is tempted to prolong his illness. The factory also does the same. Instead of meeting man's wants, it multiplies them. It regards the people as children. Just as children throw away old toys when they see new ones, so also the factory-owners tempt the people to throw old articles and get new ones... If we crave for more things than needed, we become slaves of the factory. There is no happiness in slavery. Our troubles increase in the same proportion as our wants.[26]

Granted the validity of this analysis, the only alternative to the malaise lies in voluntary reduction of wants. That is why Gandhi proposed the one-line environmental ethics: "The world has enough for everybody's need, but not enough for one person's greed."[27] From this follows Gandhi's insistence on simplicity of life:

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[25] *Young India*, 22.10.1931, vol. XIII, 318.

[26] *Harijan*, 22.1.1950, vol. XIII, 407.

[27] R. K. Prabhu, *Mohan-Mala* (A Gandhian Rosary), Ahmedabad: Navajivan Publishing House, 1949, 20-21.

> Simplicity of life and the simplification of the machinery of living must be realized as a supremely essential condition of the coming of the new era. In the civilization of the future, an era of natural harmonious living will be inaugurated and artificial, luxurious and pompous living will be entirely rooted out. Simplicity of life being a condition of spiritual perfection, we may look forward to an era of civilization in the future, greatly superior to all the civilization of the past, if only we accept simplicity of life as the best method of living.[28]

If we don't pay heed to it, Gandhi says, we become thieves in a way.

> If I take anything that I do not need for my own immediate use and keep it, I thieve it from somebody else. I venture to suggest that it is the fundamental law of Nature, without exception, that Nature provides enough for our wants from day to day, and if only everybody took enough for himself and noting more, there would be no pauperism in this world, there would be no man dying of starvation in this world.[29]

Lest we should fall into the category of thieves, Gandhi admonishes us to undergo voluntary poverty. This is so particularly in the Indian context.

> In India, we have got three millions of people who have to be satisfied with one meal a day and that meal consisting of a chapatti containing no fat in it and a pinch of salt. You and I have no right to anything that we really have until these three millions are clothed and fed better. You and I, who ought to know better, must adjust our wants, and even undergo voluntary starvation in order that they may be nursed, fed and clothed.[30]

Personally, Gandhi practised the principle of voluntary poverty so much so that the simplicity of his lifestyle became phenomenal. When he died, all his belongings were only so much as to be put in a brief case. There were three pairs of loin cloth, a pair of spectacle, a pair of sandal, a pocket watch, and a few other odds and ends. The worth of all these things at that time amounted to just Rupees 20.

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[28] *Harijan*, 20.4.1922, vol. IV, 197.

[29] M. K. Gandhi, *From Yeravda Mandir*, Ahmedabad: Navajivan Publishing House, 1932, 13-15.

[30] Shriman Narayan, *The Selected Works of Mahatma Gandhi*, New Delhi: Publication Division, Government of India, 1968, 385.

4.2. Appropriate Technology

Gandhi agreed with economists of the day that any concern with goods requires 'mass production'. However, his concern with the poor people necessitated him to emphasize 'production by the masses'. Simultaneously, on account of his concern with Nature, he insisted upon producing goods by utilizing the local resources and appropriate to the local environmental conditions. By way of illustration, Gandhi projected "*Charkha*" (spinning wheel) as the ideal appropriate technology devised at that time. If at all there is to be modern industrial development, it should supplement and reinforce the development of small-scale industries and agriculture in the hinterland, appropriate to the village environment:

> If I can convert the country to my point of view, the social order of the future will be based predominantly on the *Charkha* and all it implies. It will include everything that promotes the wellbeing of the villagers. I do visualize electricity, ship-building, ironworks, machine-making and the like existing side by side with village handicrafts. But the order of dependence will be reversed. Hitherto, the industrialization has been so planned as to destroy the villages and the village crafts. In the state of the future it will subserve the villages and their crafts...[31]

Even with regard to production of crops, Gandhi insisted that it should be appropriate to the local conditions rather than hybrid varieties today.

> The production of crops should be controlled keeping two considerations in mind. 1) The locality must try to produce its own food requirements and raw materials required for primary necessities of life in preference to commercial crops. 2) It must try to produce raw materials suitable for village industries rather than for factories.[32]

Gandhi was aware of the acclaimed values of chemical manures. But he was clear that they were only temporary. But appropriate to the local environment, he insisted on organic manure. He warned them that trading in soil fertility for the sake of quick returns would prove to be a disastrous. It would result in virtual depletion of the soil.

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[31]V. V. Bhatt, "The Development Problem, Strategy, and Technology Choice: *Sarvodaya* and Socialist Approaches in India," in *Appropriate Technology and Social Values-A critical Appraisal*, eds., F. A. Long and A. Oleson, Cambridge: MA Ballinger, 1980, 172.

[32]*Harijan*, May 12, 1946, vol. X, 127.

> We must replace what we take from the soil. The harvesting of crops leads to the impoverishment of the soil which should be replenished by cattle dung and by ploughing in of grasses. But chemical fertilizers affect the soil in much the same way as drugs affect the human body. They produce temporary exhilaration, and then there is relapse. Bumper crops are obtained but they cause new diseases and deficiencies in the soil... Chemical sprays affect the crops adversely and shorten considerably the life of the soil itself.[33]

Among the Indian scholars who supported Gandhi's ideas of appropriate technology was John Cornelius Kumarappa. He had done his studies in economics in the London School of Economics and later went to the US to do his doctorate in Colombia University. After finishing his doctorate, when he came back to India, he was so much taken up by the ideas of Gandhi that he became a clear spokesman of Gandhian ideals in reference to economics. Gandhi was not a professional scholar. He was s visionary, a prophet. But J. C. Kumarappa, an ardent disciple of Gandhi, put the visions of his master in black and white and spoke for appropriate technology in a professional way. As against the showy economics of modernity, J. C. Kumarappa spoke of "Economy of Permanence." Just to illustrate it regarding issue of artificial manure versus organic, he says:

> Just as the human system can be stimulated beyond its normal performance by drugs such as morphia, similarly plants also can be subjected to an unhealthy enhancement of their growth and production by the use of drugs. Chemical fertilizers can produce this effect, but it is an unhealthy, short-sighted and unnatural state of affairs.[34]

Again, he says elsewhere:

> Mineral fertilizers do not feed the land. They merely excite it to a certain extent like a stimulant and thereby it apparently increases production without a proportionate increase in the nutritive values, with the result that mineral fertilizers progressively deteriorate the health of animals and men as the food produced on fertilizers are not products of a soil that has been fed but one that has been merely stimulated.[35]

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[33] *Harijan*, April 14, 1946, vol. X, 84.
[34] *Harijan*, March 2, 1947, vol. XI, 41.
[35] *Harijan*, April 10, 1949, vol. XIII, 41.

> The many experiments that have been carried out show that the seeds and better still the leaves of plants fertilized with stable manure increase the capacity for disease resistance when fed to animals as compared with seeds and leaves of minerally fertilized plants, thus showing that the manures not only improve the soil structure but the consequence of manuring projects itself far into the animal kingdom reaching out to man himself.[36]

There were several other scholars who also voiced Gandhi's concern for appropriate technology in the field of agriculture. N. R. Dhar, already during the life time of Gandhi, said thus:

> As regards inorganic manures, the artificial manures like ammonium sulphate, ammonium nitrate, etc., which are likely to be manufactured in India, do not enrich the soil and increase soil fertility permanently. Most of these manures are lost as nitrogen gas without adding nitrogen to the soil. Hence, soils treated with such artificial manures may temporarily increase the crop yield but usually they deteriorate and their nitrogen content may fall off. On the other hand, organic manures like cow dung, farmyard manure, molasses, etc., when added to the fields, not only add to the nitrogen they contain but the soil is also enriched by the fixation of atmospheric nitrogen. The value of cow dung or molasses depends chiefly on its power to fix atmospheric nitrogen.[37]

Prominent among the non-Indian economists who shared Gandhi's viewpoint was Ernst Friedrich "Fritz" Schumacher, who later played a key role in popularizing appropriate technology worldwide. It is significant that Schumacher called Gandhi 'the greatest economist of the 20th century'. No wonder then that he played a key role in popularizing appropriate technology worldwide.

4.3. Recycling of Resources

Today from the ecological point of view the secret of life is talked about as the law of recycling process. The same scientific law was explained from a common man's point of view by Gandhi and his economic spokesman J. C. Kumarappa as follows:

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[36] *Harijan*, April 10, 1949, vol. XIII, 42.
[37] *Harijan*, August 17, 1947, vol. XIII, 279.

> Few people realize that the quality of the health, growth and reproduction of plants, animals and human beings depend a great deal on the quality of manures that are fed to the soil. When we put manures into the soil, we are feeding the soil and to the extent the soils are fed the produce of the soil will also be nutritive, and the products of the soil will also be nutritive, and the products of the soil are usually the basis of the requirements of animals and men. The cycle is not complete here. If the soil produces good food for animals and men, that food when digested and returned back to the soil again, is also a better soil food, thus the circle of goodness goes round and round rising in a spiral for the benefit of plants, animals and human beings. There is an old saying, "who feeds well manures well." We may put in a complement of this, "who manures well feeds well," thus completing the whole process.[38]

Gandhi would never like to waste anything. As against the 'use and throw' culture of today Gandhi would say: 'Don't throw away things', rather recycle things as much a possible. Even a sheet of paper should be used carefully, according to him. He was known for writing his drafts in one-side papers only. Particularly, the postal envelopes in which he used to get letters were never thrown out. They would be unfolded and, then, straightened into a sheet of paper, that he could make use of the inner side of the envelopes for writings the drafts. As regards other things also he would never throw them away that easily. In fact, there was a pencil, which he used to have till it was only a stub. People said "Bapu, are you so poor I can give my pencil?" But Bapuji's retort was: "I can still use it. Why then should I throw it away and get a new one from you?"

Gandhi was totally opposed to industrialization of agriculture. The reason was that it traded in soil-fertility for the sake of quick returns. That would prove to be disastrous and short-sighted, he said. On the contrary, the use of organic farming would enrich the soil. To that effect, therefore, everything should be recycled.

> Except the skin and fat of the carcass, every other product and can be returned to earth as manure, which revitalizes it. The carcasses of small animals are straight away buried and become valuable as manure. If the carcasses without skin and fat are returned to soil, there is no loss economically, but instead, in an agricultural country like

[38] *Harijan*, April 10, 1949, vol. XIII, 41.

> ours, it seems such a burial of the carcass would be a valuable gain in replenishing the soil.[39]

Gandhi said that the very life-growth consists in the recycling process only:

> The process of life depends as much as decay as on growth. Healthy growth can only take place when there has been proper decay of organic matter which becomes humus. This can only be brought about by the working of soil bacteria, reckless use of sulphate of ammonia, nitro-chalk, potash and other salts kills these bacteria, and so the plant cannot remain healthy when there is no humus in the soil.[40]

That is why Gandhi was always in favour of burying whatever could be buried and thereby making it organic manure.

> The bones are mostly wasted. They should be carefully collected and turned scientifically into manure. The entrails are utilized for gut, but there is room enough for improvement. The flesh should be saved from the filthy use it is turned to and must be made to yield fat, which will be valuable for manufacturing grease for factories. The remains should finally be converted into manure or buried deep.[41]

Again, if Gandhi was opposed to artificial chemical manure it was because it did not contribute to the recycling process.

4.4. Inter-relationship of Humans with Elements of Nature

Gandhi was always keen on making people realize that human being is only a part of nature. If any part of a system removes itself from the web of interrelationship with the whole, then it will be self-destructive. Hence, his insistence upon people building up a healthy relation with the whole Nature, with all its Elements: mother earth, rivers, air, plants, and animals.

4.4.1. Mother Earth

Gandhi says:

> Walking and hiking, outdoor games of all sorts – playing them ourselves and not watching others play them – bicycling, swimming, gardening, digging in allotments, things that bring us once more into contact with Mother Earth, the Sun, the wind and even the rain, all these make for health more readily and more pleasantly than anything

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[39] *Harijan*, April 8, 1933, vol. I, 6.
[40] *Harijan*, April 14, 1946, vol. X, 84,
[41] *Harijan*, March 18, 1933, vol. I, 3.

> we do at the bidding of the drilling sergeant or the gymnasium instructor. "Exercise" would not be a bad slogan in this matter.[42]

Even when an earthquake took place, Gandhi was not prepared to give up his firm belief in the harmonious functioning of the Mother Earth. If at all any such calamity takes place it is only because of our intrusions, not otherwise, he said:

> I share the belief with the whole world – civilized and uncivilized – that calamities such as the Bihar one (earthquake) come to mankind as chastisement for their sins. When that conviction comes from the heart, people pray, repent and purify themselves. I have but a limited knowledge of His purpose. Such calamities are not a mere caprice of the Deity or Nature. They obey fixed laws as surely as the planets move in obedience to laws governing their movements. Only we do not know the laws governing these events and, therefore, call them calamities or disturbances.[43]

Gandhi's holistic vision made him discover an inner meaning for such happenings like an earthquake and as means for inner purification.

> There is a divine purpose behind every physical calamity. That perfected science will one day be able to tell us beforehand when earthquake will occur, as it tells us today of eclipses, is quite possible. It will be another triumph of the human mind. But such triumph even indefinitely multiplied can bring about no purification of self without which nothing is of any value. I ask those who appreciate the necessity of inward purification to join the prayer that we may read the purpose of God behind such visitations, that they may humble us and prepare us to face our Maker. Whenever the call comes, and that we may be never ready to share the sufferings of our fellows whose ever they may be.[44]

4.4.2. Rivers

Gandhi says:

> We have more Ganges and Jamunas than the two. They remind us of the sacrifices we must make for the sake of the land we are living in. They remind us of the process of purification that we must

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[42] *Harijan*, September 30, 1939, vol. VII, 287.
[43] *Harijan*, February 2, 1934, vol. II, 1.
[44] *Harijan*, June 8, 1935, vol. III, 132.

> continuously go through as the rivers themselves are going through from moment to moment. In the modern rush, the chief use we have for our rivers is to empty our gutters in them and to navigate our cargo vessels, and in the process make them dirtier still. We have no time to stroll down to these rivers, and in silent meditation listen to the message they murmur to us.[45]

As to the duty of safeguarding the purity of water, Gandhi has this to say:

> A sense of national or social sanitation is not a virtue among us. We may take a kind of a bath, but we do not mind dirtying the well or the tank or the river by whole side or in which we perform ablutions. I regard this defect as a great vice which is responsible for the disgraceful state of our villages and the sacred banks of the sacred rivers and for the diseases that spring from insanitation.[46]

Gandhi was well-known for carefully maintaining the serenity and the cleanliness of the streams. Whenever he was in the Sabarmati Ashram, he would go to the river for ablution, but with a jug with him. He used to get into the ghat and draw water in the jug, come to the bank of the river and wash his face and hands only with the jug water. The reason he gave was that he had no right to pollute the clean water that was flowing in the river.

4.4.3. Air

Gandhi's comments are very interesting. By showing that it is very basic to life, he reminds us of the duty of not polluting it.

> Man can live without food for several weeks, without water or sometime, but without air, he cannot live for more than a few minutes. God has, therefore, made air universally available. Shortages of food or water there may be at times but of air never. In spite of it we foolishly deprive ourselves of God's blessings of fresh and pure air by sleeping within doors with doors and windows shut... To get fresh air, one must sleep in the open. But it is no good sleeping in the open only to breath dust and dirt-laden air. The place where you sleep must be free from both. Some people cover their faces as a protection against dust and cold. It is a remedy worse than the disease... Anyone who

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[45]M. K. Gandhi, *Key to Health*, Ahmedabad: Navajivan Publishing House, 1948, 5.
[46]*Young India*, 23.12.1926, vol. VIII, 16.

> fouls the air by spitting about carelessly, throwing refuse and rubbish or otherwise dirtying the ground, sins against man and nature.[47]

Gandhi was worried that modern civilization has put a prize even for such an essential element.

> Air is the most essential. Consequently, nature has provided it to such extent that we can have it at no cost. But modern civilization has put a price even on air. In these times, one has to go off to distant places to take the air, and this costs money... Whether air is free or has to be paid for, we cannot carry on without it for a moment. We have seen that blood circulates through the entire body, is purified after returning to the lungs and flows out again. This goes on all day and all night. Every time we breathe out, we expel fouled air, when we breathe in, we obtain, from the air without, oxygen with which to purify the blood. This respiration continues every moment and the life of our body depends upon it.[48]

4.4.4. Plant Kingdom

> Trees are living beings just like ourselves. They live and breathe, they feed and drink as we do and like us they need sleep... We should feel a more living bond between ourselves and the rest and animate creation.[49]
>
> I find in it a thing instinct with a deep pathos and poetic beauty. It symbolizes true reverence for the entire vegetable kingdom, which with its endless panorama of beautiful shapes and forms, declares to us as it were with a million tongues the greatness and glory of God.[50]

Even from the utilitarian point of view, Gandhi said, we should cultivate respect to plants. We should not interfere with their laws of growth unduly. J. C. Kumarappa explains it convincingly:

> If our agricultural food production is to supply the normal requirements of the human body, the plants from which we draw that food must also be healthy, normal and well-fed. Any artificial stimulant or artificial feeding will naturally affect our food as we depend upon, especially in our country, so largely on plant life as

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[47]Gandhi, *CWG*, vol. 83, 315-16.
[48]Gandhi, *CWG*, vol. XI, 453.
[49]*Young India*, 5.12.1929, vol. XI, 395.
[50]*Young India*, 26.9.1929, vol. XI, 320.

food. Hence it becomes imperative that we should watch the food given to these, the medicines administered and the drugs supplied. If there is any undue dose at any stage it will ultimately tell on the health conditions of the human being.[51]

There was a particular instance that took place in his life in Yerwada jail. One day Gandhi wanted a few neem leaves for medical purposes, to treat toothache. They were to be crushed and made into a paste and be applied to the teeth. One of his associates Kaka Kalelkar brought a twig of a neem tree. Gandhi was so pained at it that he reprimanded him, with almost tears in his eyes:

> It was *himsa*. What was required is just three or four leaves. Why did you break a twig? Even the four leaves that you pluck from the tree, you must pluck with remorse of conscience. How could you break such a big twig from the tree? And that too at night, when it the tree rests, how would you dare disturb it?[52]

Again, since Gandhi used to brush his teeth with a neem stick, Kaka Kalelkar brought everyday a new stick from the tree. When Gandhi noticed it, he objected to it: "We can use the same stick after cutting the used portion, also on the following day, till it is completely dry and becomes unusable."[53] The reason he gave was that we have no right to take from the nature more than the necessary.

4.4.5. Animal Kingdom

Gandhi's rapport with the animals was more intense. Once he said:

> I do believe that all God's creatures have the right to live as much as we have. Instead of prescribing the killing of the so-called injurious fellow-creatures of ours as a duty, if men of knowledge had devoted their gift to discovering ways of dealing with them, otherwise than by killing them, we would be living in a world befitting our status as man-animals endowed with reason and the power of choosing between good and evil, right and wrong, violence and non-violence, truth and untruth.[54]

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[51] *Harijan*, March 2, 1947, vol. XI, 41.

[52] Kaka Kalelkar, "Gandhi's Vision," as retold by *Shri Gandhi and Lenin* [Tamil], 2nd edition, Madras: Star Publication, 1983, 59.

[53] *Young India*, 5.12.1929 vol. XI, 395.

[54] *Harijan*, January 9, 1937, vol. IV, 382.

Gandhi was sympathetic towards the minute creatures also:

> Rats and fleas spread infection and the experts say that these have got to be exterminated. But rats and fleas are messengers of God. God speaks to us through them. In villages where nature has blessed you with the finest climate and healthiest soil, as I can see with my own eyes, you have so infringed nature's rules that plague seems to have come to stay. You may destroy some rats and fleas, while they have a knack of appearing again and again, if you do not make your houses and the surroundings inhospitable to them.[55]

Gandhi wanted to establish relationship even with frightening creatures like the snakes. At one stage he was finding difficult to overcome the fear of snakes. He asked somebody to bring a snake and leave it into the hut where he was living. He let the snake to carry on its life with him in his own hut. For a month or so the snake was there just to get his fear removed from his heart. It is no wonder that he said we should not kill snakes just because of our common prejudice that they are all poisonous. "Since nine-tenths of snakes are non-poisonous and are valuable protectors of fields against rats, etc., it would be a good thing if a simple key for distinguishing poisonous from non-poisonous snakes can be had."[56] With all these sympathies for animal kingdom, it becomes much more understandable why Gandhi had a great respect for cow worship, as advocated by Hinduism. According to him, cow is "a symbol of the whole of animal kingdom." It "not only represents the cattle but also it is the mildest and the most beneficial of all creatures."[57] Hence, he supported popular worship of cow among the Hindu people.

4.5. Village Oriented Vision

Gandhi's broader vision of society was one that is based on a village set-up primarily, because it was based on an eco-vision. Today, in the West, there are very many people who go to the countryside and pitch their tents and start community life in the rural side. They have witnessed the dark side of city life and got bored with it. But, already at that time, Gandhi insisted upon a village setup. It was in defiance of the worldwide trend towards industrialization and urbanisation that Gandhi worked for renewal of

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[55] *Harijan*, January 9, 1937, vol. V, 382.
[56] *Harijan*, August 17, 1935, vol. III, 215.
[57] *Young India*, 8.6.1921, vol. III, 154.

villages. The city life, the urbanized, industrialised life is very dangerous for humanity, he forewarned. The reasons were both moral and ecological. The growth of cities and factories was possible only through a one-sided exploitation of the countryside."[58] The blood of the villages is the cement with which the edifice of the cities is built. He wished to see the blood that is inflating the arteries of the cities runs once again in the blood vessels of the villages. How much did Gandhi wish that humankind returned to village life!

> I feel that the country is heading for destruction, the speedier as the cities grow in size and number. My attempt to stop this exodus from villages is like the play of a child that holds a piece of straw in the falling waters of a cascade to stop the fall. But I like to indulge in that childish play.[59]

Having witnessed that the process of mechanization was gripping the villages as a result of which the poor villagers were losing the precious use of hands for hard work, Gandhi expressed his deep grief:

> The more I penetrate the villages, the greater is the shock delivered as I perceive the blank stare in the eyes of the villagers I meet. Having nothing else to do but to work as labourers side by side with the bullocks, they have become almost like them. It is a tragedy of the first magnitude that millions have ceased to use their hands as hands. Nature is revenging herself upon us with terrible effect for this criminal waste of the gift she has bestowed upon us human beings. We refuse to make full use of the gift. And it is the exquisite mechanism of the hands that among a few other things separates us from the beast millions of us use them merely as feet. The result is that she starves both the body and mind.[60]

Even the use of machine and the consequent neglect of the peasants and the village artisans have caused pauperism. Therefore, instead of mass production through industrialization it is production by masses that is the true remedy, according to Gandhi.

> But the criminal neglect of the peasants and the artisans has reduced us to pauperism, dullness and habitual idleness with her magnificent

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[58]*Young India*, 8.6.1921, vol. III, 154.

[59]Mahadev H. Desai, *Day-to-Day with Gandhi*, Varanasi: Sarva Seva Sangh Prakashan, 1968, vol. 1, 145.

[60]*Young India*, 17.2.1927, vol. IX, 52.

> climates, lofty mountains, mighty rivers and an extensive seaboard, India has limitless resources, whose full exploitation in her villages should have prevented poverty and diseases. But the divorce of the intellect from body-labour has made of us perhaps the shortest-lived, most resourceless and most exploited nation on earth.[61]

Even Gandhi's interest in nature cure arose out of his eco-vision only. He was totally convinced of the fact that Nature has endowed us all with enough capacity for the resistance of disease. It is only when we are careless of her laws, we ruin that capacity. We have to regain it by healthy and hygienic ways of living and eating habits. He says:

> I can assist Nature, for instance, by getting rid of the effective cause of the impurity, so that more of it does not accumulate. That is to say, if I stop eating for the duration of the illness, thus preventing the ingress of further impurity; and if I exercise in fresh air, I shall also start ejecting the impurity through the skin. That this is the golden rule for keeping the body free of disease, everyone can prove for himself. Only, the mind must be kept in a stable state. One who reposes true faith in God will always act in this fashion.[62]

Again, looking at the quick and exploitative use of resources, granted that the energy resources are limited, it becomes an imperative that we use them only in a limited way. Here, Gandhi's emphasis on the beautiful dictum "renounce and enjoy" becomes really meaningful. It is actually the first verse of the *Īśōvāsya Upaniṣad*. You are allowed to enjoy the resource, nature but renounce. That means, make an act of faith that you are not the owner. I renounce at the feet of God and enjoy because I am given an opportunity to use it. When you have the attitude of renunciation and detachment, naturally, your act of enjoyment will be restricted only to the bare minimum.

5. Conclusion

Over the years in the recent past there has been a greater recognition of the ecological concerns. Efforts are on to make a difference in the post-industrialization phase and lifestyle changes or a mix of both. But, today, with the release of the Report of Intergovernmental Panel on Climate Change (IV), it is clear that there is almost unanimity of opinion among the

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[61] *Harijan*, 7.9.1934, vol. II, 234.
[62] Gandhi, *CWG*, vol. XI, 435.

world scientists and leaders of both the Annex I and Annex II countries regarding the impending disaster. They also agree upon the fact that the ecological challenges that affect us today are the result of the by-products of the massive industrialization of the Annexe I countries over the past 100 years. With more emissions of the GHGs to come due to the developmental projects by the Annexe II countries also, the whole biosphere is destined for catastrophe. Unless all the countries commit themselves to do whatever they can within their capabilities, and simultaneously look for ways of making their citizens make the right choices by seriously changing the options defined by their development policies, there is no future at all.[63]

Against this background, people today find it their mission to put a break to the technological development and keep it within limits. It implies reduction of the use of fund resources and reliance on the renewable resources, reorientation of lifestyle in favour of simplicity, respectful dealing of Nature as a life-partner, natural resources management, pollution control measures, etc. In a word, an eco-vision is an ecological imperative.

The primary requirement of this imperative is that modern human beings ought to disabuse themselves of any wild vision of being able to subdue and conquer the nature as they like. Unless humankind learns to coexist harmoniously with the nature as a whole and with earth in particular, there is no future at all for survival of life. Accordingly, they have to be convinced that the development they have indulged in so far is no development at all and that the total amount of technological activity must be kept within the limit for solving our environmental problems.

It is precisely such an eco-vision that Gandhi cherished almost spontaneously, probably because of his religious bent of mind and spiritual outlook on Nature. Over and above, he was a perceptive thinker, voracious reader, and critical analyst. So, he could easily see the wrong direction in which the modern science was set. Hence there came up his prophetic denouncement of science, forewarning of the ecological catastrophe of the wild vision, and proclamation of the required eco-vision.

What interests us today is that Gandhi's eco-vision is backed up by scientific data. Ecology as a science has now established that Nature as a whole is a self-maintaining and self-replenishing system whose parts are interconnected and interdependent for the upkeep of the whole. Any system

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[63]Joyashree Roy, "Globally Warmed-Up Questions," *Indian Express* (New Delhi), 14.2.2007, 10.

will have all the parts intertwined. If one part falls apart then it creates a loophole there. That is, the whole is no more a system. In the same way, the whole natural setup, including human being, is a system. Even the humans are only a part of the system and, therefore, they have no right to cut themselves away from the nature-system. Insofar as they are part of nature, they will have to be conscious as a part of the whole system and deliberately be a part. Otherwise, it will be self-destructive.

From a functional/dynamic point of view, ecology has established that nature is like a living organism whose functions are so interactive that when only one of its parts is not functioning properly, the whole body will suffer. Human species is just one among the parts of the organism, that, too, a most fragile part and not the master of others parts of the organism. Nor can they consider Nature simply as an object. The approach of the modern sciences and technology was to consider the environment as a whole in terms of a material object. Earlier, people thought that they can tamper with it and exploit it as they like it. Scientists, however, have themselves agreed upon the 'limits to growth'. The so-called progress in terms of exploitative use of natural resources is not really growth. Since the Industrial Revolution, and our concomitant massive and growing consumption of mineral and energy resources, human activities have sometimes exceeded the limit of the local ecosystems, and are now threatening to overwhelm even the global ecosystem.

Further, the world scientists are coming out with undeniable evidences to establish that the rigorous structure of the system as well as the meticulous dynamism of this organism is spoiled because of the anti-Nature developments. Thus, they have contributed to the ecological imperative for sustainable development.

The real world-vision that will salvage the world from the ecological catastrophe is that which humbly accepts that humankind is only a part of a larger system which links human species to the environment, to past and present and future generations. It means further that we realize the outer limits of the biosphere, show due respect to all species of life, even establish deep communion with them, make use of natural resources frugally, and with responsibility to replenish the earth for what we take from it, enjoy things with detachment, leave for the future generations. In one word, "sustainable development" or "development through appropriate technology" is a key factor of the eco-vision.

Journal of Dharma 31, 4 (October-December 2006), 437-456

ENVIRONMENTAL CRISIS AND RELIGIONS

Jose Kalapura♦

1. Introduction

There is a close linkage between ecology and religions.[1] The crisis in our ecosystem endangering the life of humans and other living beings is one of the most frightening problems of the present time. This crisis is very much a religious and spiritual issue and demands a befitting response through scientific outlook and religious approach.[2] Creating a healthy and wholesome environment involves restoring the innate health of the cosmos that has been tarnished because of various causes.

The philosophical and theological perspectives of the Hindu and Christian traditions enable us to perceive the basis for an ethical imperative for the need of nurturing a cordial relationship with Nature.[3] The ancient Indian traditions had scientific study and meticulous calculations of the cosmic phenomena, which resulted in well-developed branches of science: astronomy, astrology, mathematics, etc.[4]

In the following pages, I examine first the extent of the ecological crises today. In the second part, I examine the perspectives and potentials in Hinduism and Christianity with special focus on understanding the concept on life in relation to cosmos in each of these traditions thereby to affirm the harmonious interface of ecology and religions and the need to preserve ecology for a healthy universe.

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[1]For a general discussion on Hinduism, see Monier Williams, *Religious Thought and Life in India* (1893), Calcutta: K. P. Bagchi and Company, 1978, 313-350.

[2]For further discussion, see O. P. Dwivedi, ed., *World Religions and the Environment*, New Delhi: Gitanjali Publishing House, 1989.

[3]For a philosophical treatise on ecology, see Murray Bookchin, *The Philosophy of Social Ecology: Essays on Dialectical Naturalism*, Indian ed., Jaipur: Rawat Publications, 1996, 97-146.

[4]See Ishwarbhai Patel, *Sciences and the Vedas*, Bombay: Somaiya Publications, 1984.

2. Environment and the Crisis

The Encyclopaedia of Social Sciences defines environment as "the aggregate of all external conditions and influences affecting the life and development of an organism."[5] Environment means the entire ecosystem of a place where living beings and non-living beings exist. The term *environment* comes from the French word '*environner*'; from *environ*, around and from *virer*, to turn round, together meaning, external conditions or surroundings influencing development or growth of people, animals or plants, and concern about their preservation from the effects of population.[6]

Our environment has three components: physical, biological, and cultural. The physical environment consists of areas as geology, topography, surface, and ground water resources, and other mineral wealth. Physical environment is essential for the existence of life of various organisms. The biological environment refers to flora and fauna and exists to support mutual survival of all organisms by providing nourishment. Cultural environment includes human population distribution, population trends, historic and archaeological sites, the economic indicators of human welfare, value system, and other aesthetic, moral, and spiritual dimensions.

The ecological relationship among plants, animals, and environment must be maintained for smooth functioning and survival of the biosphere, maintenance of atmosphere, hydrosphere and lithosphere. The ecological equilibrium must be preserved at any cost if life on the planet earth is to survive. Our problem arises due to disturbed and upset equilibrium of the natural environment either by human activities or other causes, exerting, in turn, pressure on the biosphere. The imbalances on the biosphere create structural and functional changes in atmosphere, hydrosphere, and lithosphere. The following actions tilt the 'natural equilibrium': 1) monoculture agriculture, deforestation, land development, creation of manmade lakes, dams, and other activities which change the structure of the earth, 2) extraction of minerals, discharge of various substances into atmosphere, water bodies, and on land, which change the composition of the biosphere, and 3) changing of the energy balance.

The present exploitative mode of development of society population-wise, production-wise, and consumption-wise will have negative effects

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[5] *International Encyclopaedia of Social Sciences*, 1968 edition, vol. 9, s.v. "Environment."

[6] *Promotio Justitiae* (April 1999), §70.

which might result in irreversible changes and depletion of resources in biosphere, atmosphere, hydrosphere, and lithosphere creating fatal ecological crisis. Unfortunately, however, these intricacies of nature were given a goodbye during the last hundred years of economic development world over. The phenomenal increase of human population, necessitating an accelerated production rate and the consequential onset of consumer culture has contributed to the eco-crisis of the present age. As a result, humans have begun to face dwindling of natural resources, fossil fuels, raw materials, and decline of the bio-diversity, besides the erosion of fertile land, and the depletion of water so vital for human sustenance and survival. The rapid advance in technologies has made the situation all the more alarming and the risks involved in the production process are heightening day by day.

2.1. Global Warming and Climate Change

An immediate impact of environmental degradation is global warming. Global warming means rise in temperature due to build up of atmospheric green house gasses and the negative effects of rising temperature like melting glaciers, higher level of oceans or changing precipitation patterns. The surface temperature of the earth is kept at an average of 15 degrees Celsius, giving a temperature range, which is ideal for life, by a combination of gases in the atmosphere which produce a natural greenhouse effect. The warmth of the sun's rays is reflected off the earth's surface and trapped in the atmosphere and the air, and the earth itself is warmed. Scientists call this natural construction Green House Effect, which results in climatic changes.[7] Global warming has become a major scientific, economic, and political issue in the present context. Today droughts and floods have become a common phenomenon in most of the developing countries including India. Global warming is a consequence of the rapid process of globalization. This phenomenon creates an imbalance in the whole environment.

Also, Nitrogen Oxide and Sulphur Dioxide gases are causing acid rains in various parts of the globe. CFC (Chlorofluoro Carbon) present in the upper layer of atmosphere leads to the depletion of ozone layer and cities like Los Angeles and Tokyo are hard hit. Carbon Dioxide is the main contributor of Green House Effect, raising the level of temperatures all over the world. Almost 14% of Carbon Dioxide comes from the burning of fossil fuels.

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[7]S. Michael Northcott, *The Environment and Christian Ethics*, New York: Cambridge University Press, 1996, 3.

Similarly, lead pollution from industry causes serious environmental hazards.

Climatic change is another major threat facing humankind with extreme weather events, droughts, and rise in diseases. It is recorded that "over the last 400,000 years, the earth's climate has shown very significant temperature changes, going from a warm climate to an ice age in as rapidly as a few centuries."[8]

2.2. Environment and Globalization

Ecological and socio-economic systems are already under tremendous pressure in the wake of rapid urbanization, industrialization, and economic growth in the present globalised scenario. One of the major factors precipitating environmental crisis is the commodification of nature and resources which entailed the introduction of market economy, rise of the world economic system and its evolution into European industrialism and its eventual diffusion to every region on the planet. Today, with the advancement in science and technology, nature is reduced to the status of material bank and human living space. Nature was perceived in the classical scientific paradigm as 'unproductive' and meaningless. Early modern scientists, such as Francis Bacon, could speak of "putting nature to test" – a figure of speech for torture. Globalization with its Western model of development has caused irreversible and irreparable damage to the environment.

Globalization exploits the environment to the maximum for profit by treating all aspects of environment as mere commodities. In our age of globalization humans still consider other living creatures to be mere objects, to be manipulated genetically, patented and sold like any other commodity. With globalization many consequences are seen which are detrimental to the environment in general.

India is one of the top 12 countries, which has the richest biodiversity in terms of varieties of species, land, and other resources. With the Western dominant model of development propagated by globalization tendencies, most of the resources like, land, forest, mineral, water, fisheries, and animals are on the verge of extinction. In short, our air, water, rain, forest, fauna and flora, rare species of animals and birds are threatened with extinction.

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[8]Ajay Ghosh, "Global Warming: Consequences for Humanity," in *Indian Currents*, August 31, 2003, 34-37.

In the context of globalization and its impact on environment, it could be said that many developmental activities turn out to be disastrous. In the name of development, for example, World Bank has funded projects like Narmada Dam, which resulted in tremendous ecological disaster displacing thousands of people. The industrial and nuclear waste and refuses are being dumped in and around the developing and undeveloped nations by the prosperous nations, causing health hazards on an unprecedented scale. For instance, almost 10% of industrial and atomic waste reaches Guinea every year. In many countries of Africa, the poisonous dioxine gas has spread notoriously, causing dreadful disease like cancer. The UN agency on environment has estimated that almost every year about 487 tons of nuclear waste is unleashed in the world and the greatest share in this unleashing of waste is that of America.

The poor countries, in the context of ever-rising need of economic aid from the rich countries, cannot resist the diabolic game of the highly industrialized countries. Unfortunately, here also monetary gains supersede the risk caused to the humankind living in developing and undeveloped countries. It has been calculated that in destroying one ton of waste of any kind – industrial or nuclear – involves in America and Europe an expenditure as high a sum as 500 dollars but if a ton of waste is thrown in the vicinity of Africa it incurs a paltry expenditure of only 2.5 dollars. Thus, if, on the one hand, the countries lagging behind in development are being treated as sacrificial goats the prosperous and developed nations have been overtaken by their lust for development on such a scale that they are insensitive to the damage that they are causing to humanity at large by destroying the ecological balances.

2.3. Man-made Crisis

Examining further, it can be seen that 90 percent of the present environmental crisis is man-made. The excessive use of nitrogenous fertilizers has considerably increased concentration of nitrates in the soil and the food that we consume gets poisonous. As a result of their concentration in the river water and the water that we drink, stomach ailments have become endemic. A UN agency has calculated that by 2025 more than 48 countries of the world will be facing acute water shortage and availability of safe drinking water will be scarce. Continuous use of pesticides has affected ground water through seepage. Our rivers, ponds and streams have become polluted because the concentration is toxic. It is horrifying to note that the

level of accumulated DDT in the body tissue of an average Indian is the highest. The use of petroleum as a fuel in over 650 million automobiles in the world is causing large scale pollution. Fifteen millions of Carbon Monoxide, one million ton of Nitrogen Oxide, and 1.8 million tons of hydrocarbons are added to the environment each year. The amount of Carbon Dioxide pumped into the atmosphere due to the burning of the fossil fuels comes to billions of tons. Developed countries account for 70% of the atmospheric pollution.

The destruction of the diversity of life is not only adding to the volume of social tension but also heightening the ecological crisis. Unfortunately, in this age of mad race for development which knows no winning post the clash between development and nature is inevitable and not to be halted easily. Washington based World Watch Institute has clearly indicated and warned that there is the beginning of an unparalleled biological collapse worldwide because 3/4th of the world's birds species are threatened with extinction. Many animal species are already extinct. Air pollution of not only the mega cities but even the medium and minor cities has been forcing the government to upgrade fuel quality and run vehicles with compressed natural gas. Chemical fertilizers and pesticides are badly affecting the fauna and flora and accumulating harmful chemical substances in food causing dreadful diseases like cancer and carcinogens. Pesticides enter the human population primarily through consumption of adulterated fish and other food products. World Health Organisation (WHO) studies reveal that Indians carry the greatest body burden of pesticides.[9]

If the energy crisis is further aggravated, deforestation continues unchecked and unhindered, bio-diversity is allowed to diminish, erosion of soil goes on unhampered, our air, water, sound are allowed to be polluted more and more especially to fulfil the demands of globalisation and market economy with the aid of ever accelerated scientific inventions humankind will be heading towards the doomsday. The situation on the environmental plan is ultimately to land up to a potential dystopia or the New Dark Ages Scenario in which our natural resources are wholly ruined and society totally broken down. In this dark view, the few remnants of society would be hopelessly wandering the barren earth searching for sustenance. Environmentalists and nuclear alarmists fear such a world. "If we ignore the signs of times, and go on exploiting nature, the consequences will be greater and future generations will hold us accountable for the degradation of Earth

[9]"The Politics of Poison," *Indian Currents*, August 31, 1999, 15.

and the wealth we are given to utilize and not to exploit."[10]

2.4. Voices of Concern

Voices against the alarming ecological imbalance were raised even at the outset of the Industrial Revolution which had unleashed unbridled tapping of natural resources. At that time, however, it was argued by scientists, anthropologists, and social activists that development itself will take care of ecological imbalance. But this proved to be a misnomer and a cry in the wilderness. Credit goes, however, to Berry Commander and Rachel Carrs who, in their path-breaking publications, *The Closing Circle* and *Silent Spring*, respectively, pinpointed first of all that economic development is not an unmixed blessing. At the one end it leads to worldly prosperity, but at the other, it unleashes destruction, depletion, and disfigurement of natural resources causing environmental crisis. Since then hundreds of publications have come out all over the world bringing home the fact that the patterns of production and consumption that we have adopted are not only drawing perilous divide between the rich and the poor but causing widespread and overburdened ecological crisis.

People's consciousness has been brought to focus globally on environmental crisis since year 1986, when the 'Save Earth Fund' was founded. Several charters have been signed by nations on containing environmental degradation. One of the recent charters was the Earth Charter of the United Nations, approved and released by its Earth Charter Commission in March 2000 at Paris. These attempts to check environmental degradation, though laudable, are not powerful enough to take the problems by the horns.

There have been campaigns at the community and individual levels too. Anthropologists, sociologists and environmentalists, both at individual and group levels, are exerting their nerves not only to bring the ecological crises on focus but also to combat it. Sunder Lal Bahuguna, Medha Patkar, Arundhati Roy, Blue Wexter, Rudolph Rich, Karen Silkwood, etc., have done their bits in their own ways not only by highlighting the problem but finding some tangible solution. The pressure groups like the UK-based 'Corporate Watch', the US-headquartered 'Inter Faith', besides several centres on corporate responsibilities dispersed all over the world, are doing commendable works to make trans-national companies and corporations eco-

[10]Ghosh, "Global Warming: Consequences for Humanity," 37.

friendly. Green campaigns are being organized. Eco-friendly societies like 'Friends of the Earth', 'The Green Peace Movement', 'Chipko Movement', *Taru-mitra* (Friend of Trees) 'Save Earth Day', 'Narmada Bachao Andolan', etc., are all propagating the maxim that economics devoid of ecology is losing its market rationale.

3. Ecology and Religions

A silver line in the dark cloud engulfing the environment and ecological imbalances can be seen in the realm of religions. The glimmer of hope is keeping through the precepts and pronouncements made by religious scriptures of various faiths and their accredited messengers who have solemnly affirmed that nature exists in balance and it does not tolerate any husbanding of that balance by any external agency except its own. This brings us naturally to the discussion as to how religions and their massages conveyed by their messengers can provide effective tools for combating environmental degradation and ushering in any age that will free from eco-scare. The messages conveyed by all religions, if grounded in developing the concept of eco-spirituality, it can be asserted, can cure the cancer of eco-crisis of the present age effectively and positively and for all these we have to build a new relationship with the Earth by slowing down population growth, by using our natural resources more frugally and efficiently to achieve a sustainable economy. Christian and Indian cultural heritage is rich enough to strike a balance between developmental activities and environmental equilibrium.[11]

3.1. Ecology and Hindu Traditions[12]

The Hindu view of the human is essentially linked up with its holistic view regarding the entire cosmos. Human being is the microcosm and has the macrocosm as its prototype. It is essentially the divine life, the life immanent in and, at the same time, transcending the universe. The life of the individual self is viewed as a reflection of the Divine animating the whole cosmos. The sanctity and value of human life in the Hindu traditions consists not so much in a belief in the unique dignity of the human person as an individual and

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[11]For a discussion, see Binay Kumar Pattnaik, "Ecological Bases of Indian Traditions: Search for an Indigenous Vision," *The Eastern Anthropologist* 58, 3-4 (2005), 419-439.

[12]For a discussion on Hinduism and ecology, see Ranchor Prime, *Hinduism and Ecology: Seeds of Truth*, Delhi: Motilal Banarsidass, 1996.

immortal being as in the belief that human life, like life immanent in all creation, is an expression of the divine, eternal, infinite life which is identified with the Brahman, or the Ultimate Reality. Thus, the Hindu traditions, in general, acknowledge life as a great reality, which enjoys close affinity with the sacred and the mysterious power underlying the material universe.[13]

3.1.1. Ecology and Vedic Tradition

The Vedic seers were greatly impressed by the scientific and philosophical bases of the phenomenal universe as well as the order of the events and things in the cosmos. They believed spontaneously that there exists a correlation between the cosmic and the human order of ethical, social, and religious life. The order of human life depended on the maintenance of the cosmic order.[14]

The Vedic man believed that the best way of ensuring the cosmic order and, thereby, the human order (that is, the macro and micro-cosmic levels) was by reproducing the cosmic order of things and events in his own thought forms and actions through sacrifices and other religious ceremonies. The Vedic hymns indicate the primitive belief of the human in personified supernatural powers that presided over the natural phenomena. Sacrifices were also attempts to please the deities and, thus, to ensure the good order of the universe. The *Ṛgveda* presents Manu, the first human ancestor of human race, as the first sacrificer. Manu's sacrifice became the prototype and model of all other sacrifices.[15]

The famous hymn of the *Puruṣasūkta* (hymn of the cosmic person) traces the origin of all that exist in the universe, including the human, to *Puruṣa*, the Supreme Person.[16] The creative act is symbolically presented as the sacrifice in which the *Puruṣa* was offered as the victim. During the

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[13]See J. Baird Callicott and Roger T. Ames, eds., *Nature in Asian Traditions of Thought*, Delhi: Indian Books Centre, 1991.

[14]Arthur Berriedale Keith, *The Religion and Philosophy of the Veda and Upanishads*, Delhi: Motilal Banarsidass, 1976, vol. 1, 95-200, 252-401. Also see vol. 2, 433-535.

[15]*Ṛgveda*, 1,2,4,8; *Atharvaveda*, 1,3,7,8,12,19; *Śatapada Bhāhmaṇa*, 1,7; *Śvetasvetara Upaniṣad*, 1,3; *Chāṇdogya Upaniṣad*, 1.9.1;2.23.2; 3.14; *Māṇdukya Upaniṣad* 5; *The Upanishads*., trans., Juan Mascaro, Middlesex: Penguin Books, 1975.

[16]J. Gonda, *The Vision of the Vedic Poets*, Delhi: Munshiram Manoharlal, 1984, 270.

course of the sacrifice *Puruṣa* was dismembered and the entire universe came from the different parts of the *Puruṣa* victim. Thus, creation is the product of a ritual sacrifice. Since creation is the result of a sacrifice, every religious sacrifice performed on earth is a repetition of the primordial *Puruṣa* sacrifice and can act as a renewal of the original creative act and, thus, contribute to the maintenance of the cosmic order.[17]

The individual human beings (microcosmic human) have their origin in the macrocosmic *Puruṣa* and, hence, the latter is the image of the primeval human. This explains the divinity of the individual human being. In fact, three fourths of the primeval human (the prototype) are said to be spiritual, immortal, or divine and only one fourth is mortal or material.

Creation has two parts – *aśu* (life) and *manas* (mind). *Aśu* signifies the vital force, the principle at the basis of breath, even of animals. *Manas* is the seat of thought and emotions, and was believed to dwell in the heart (*hṛdaya*) of the human. In the *Ṛgveda*, we read a hymn addressed to *Agni* (Fire), praying that he (*Agni* god) may convey the 'unborn part' to the world of righteousness. This unborn part is understood as the inner human, devoid of birth and of psychosomatic parts. It is the same as the immortal soul, although the term '*atman*', denoting the immortal soul, was of later origin.

During the period of the *Brāhmaṇas*, the sacrificial rites acquired cosmic significance: the rites were regarded no more as propitiatory acts but as something identical with the cosmic process. The supreme task of the human was to be a sacrificer so that he could maintain the order of the cosmic phenomena by timely and faithful performance of all prescribed sacrifices. In many *Brāhmaṇa* texts,[18] *Puruṣa*, *Prajāpati*, *Nārāyaṇa*, and *Brahman* are identified or associated and signify the primordial image or prototype of the human. It is *Puruṣa* that ensouls the cosmos and creates the universe and is the source of time and space.

In brief, *Puruṣa* consists of all the creation: one fourth of him is all creatures, and three fourths are the world of the immortals in heaven. Thus, the individual human is at the same time an image of both the divine and the material world. Through human performance of the sacrifice on the microcosmic level he can ensure the continued and orderly existence of the universe where he himself finds his home.

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[17]Raimundo Pannikkar, *The Vedic Experience: Mantramanjari*, Pondicherry: All India Books, 1977, 113-132, 191-312, 613-640.

[18]For instance, *Śatapada Bhāhmaṇa*, 1,7.

3.1.2. Agricultural Ecology in the Vedas

The Vedic seers had a very thorough acquaintance with agricultural ecology[19] and purity of environment. Living in hermitages amidst the natural surrounding of forests, they acquired first hand knowledge of Nature. Thus, Vedas deal with not only philosophy, worship, rituals but also fundamental principles of the natural phenomena and practical science and secular *mantras*. The material prosperity has not been ignored while engaged in spiritual activities. Agriculture was a well-developed practical science. The Vedas have several *mantras* devoted to agriculture and method of farming, irrigation systems and plantation. The Vedas refer to Nature and forms of land and its measurement and management. The Vedas also offer useful information on some farming equipments and domestic implements. Agriculture ensured prosperity and was, hence, considered the best profession and was glorified (*ādhyātmika puruṣārtha*: the spiritual goal of human life). The earth has been proclaimed as the foster mother. Farming is the worship of Mother Earth,[20] who showers her children with all blessings such as various forms of food, fruits, drinking material, medicines, etc. The Vedic seer recommends farming which provides all things needed for human sustenance.

Earth is also called a cow that gives milk which is nourishing. The Vedas also refer to animal domesticity and cattle rearing. Domestic animals were considered faithful friends of human beings, who were supposed to pray for the safe return and welfare of the cattle, cows, horses, sheep, goats, etc. Among all the animals, the cow was revered as a pastoral deity.

3.1.3. Ecology and Upaniṣadic Tradition

The Upaniṣadic seers continued to ask questions about the ultimate origin and nature of the universe and of the human. Through a process of introspective meditation combined with rational speculation they arrived at a clear intuition that the self of the human is an expression of the universal self, or the world spirit, and is even identical with it.[21]

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[19]Dhabi Singh Mal, "Agricultural Ecology in the Vedas," *Jnanatirtha: Journal of Sacred Scriptures* 2, 1 (January 2002), 97-105.

[20]For a discussion on this theme, see Pupul Jayakar, *The Earth Mother*, New Delhi: Penguin Books, 1989.

[21]Robert Ernest Hume, *The Thirteen Principal Upanishads*, Madras: Oxford University Press, 1962, 177-293, 366-377, 391-411.

The *Śvetaśvetara Upaniṣad*[22] says that from *Puruṣa*, the Supreme Deity, the entire creation originates. In the *Kaṭha Upaniṣad* we read that the *Puruṣa* abides in the individual self. *Puruṣa* is the highest metaphysical reality, the ultimate ground of the objective world. The same *Puruṣa* is the animating principle of the subjective structures of the human.

The absolute, the *Atman* (world-soul) or Brahman has the universe as its body or manifestation. The multiplicity of objects of the world does not affect the inner unity of the absolute reality, albeit it is immanent in all forms of manifestations. Nevertheless, the human occupies a special place among the manifold manifestations of Brahman. The human can reach Brahman by entering into his own heart through intense meditation.

According to *Śvetasvetara Upaniṣad*, this planet does not belong to humanity. Everything in the universe belongs to the Lord. *Upaniṣad* teaches that the whole world is permeated by God.[23] The harmony and relatedness with nature is expressed in *Chāṇḍogya Upaniṣad*, where it is said "All this universe is in truth Brahman. He is the beginning and end and life of all."[24] In brief, the vision of the human in classical Hinduism is that of a pure spiritual self (*ātman*) without any intrinsic or substantial connection with the material body in which it is incarnated. The embodiment of the self is like an imprisonment necessitated by the law of karma that works itself out through the cycle of rebirths (*samsāra*).[25] The nature with its three constitutive qualities (*triguṇic pṛakṛiti*) binds the soul to the body and causes rebirth.

3.1.4. Ecology and Orthodox Traditions

The six orthodox systems of Hinduism differ considerably in their understanding of the human and environment. The *Nyāya* and *Vaiśeṣika* schools (systems) developed a pluralistic and theistic vision of reality and admitted the existence of a plurality of human souls, eternal, spiritual and distinct from one another. The *Sāṁkhya* School developed a dualistic metaphysics that admits, along with the reality of nature (*pṛakṛti*), a spiritual co-principle named self or *Puruṣa*. The *Puruṣa* is all-pervasive, eternal, and uncaused. It transmigrates in the *saṁsāra* (world), in bodily form and

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[22] *Śvetasvetara Upaniṣad*, 1,3.

[23] *Śvetasvetara Upaniṣad*, V, in *The Upanishads*, trans. Juan Mascaro, Middlesex, England: Penguin Books Ltd, 1965, 93.

[24] *Chāṇḍogya Upaniṣad*, 3.14, in *The Upanishads*, trans., Juan Mascaro, 114.

[25] *Māṇḍukya Upaniṣad*, part 1, in *The Upanishads*, trans., Juan Mascaro, 75-83.

temporality is acquired. *Puruṣa* is the final cause and end of the cosmic process. The plurality of selves will merge with the *Puruṣa*, ultimately, according to the *Sāṁkhya* and the *Yoga* schools.[26]

3.1.5. Ecology and Vedanta Traditions: *Advaita* School

The Advaitic School identifies human sprit with the Divine Spirit: it is one and the same spirit who is present in human beings and the material universe.[27] Śankara uses two terms to understand reality of life: *jīva* (that which breathes) or the biological aspect is part of the *Puruṣa* (that which dwells in the citadel of the heart), indicating the soul. The Śankara School accepts the plurality of selves (*jīva*) in the phenomenal level. But, on the level of the noumenon, there is only one Self who is identical with the innermost self of the human being.

The Individual Self has five layers of structure: the material body (*anna*), the principle of breath (*prāṇa*), principle of consciousness (*manas*), the seat of ego or individuality (*buddhi* or *vijñāna*) and the principle of universal consciousness (*Ātman*, corresponding to *ānanda*) which serves as the background for the whole structure. The human is part of the universe, through whom the whole universe seeks to reach up to the Divine. The point to be stressed here is that the whole of cosmos, the eco-sphere is related to human beings as both are parts of the One Brahman, the Divine Self. The *jīva* (microcosm) and the universe (macrocosm) are only expressions of the objectivization of the Universal Self or the Ultimate Consciousness.

3.1.6. Ecology and Vedanta Traditions: *Viśiṣtādvaita* School

The Viśiṣtādvaitic school stresses the unity of cosmos in the following manner. Brahman is a synthetic whole in which both the plurality of individual souls and of the material world finds their place as real moments or modes. The individual self and the Supreme Self are intimately related like part and the whole, sparks and the fire, etc. The soul with its individual mode of existence is attached to the body during its bondage in *saṁsāra* (physical life). However, the indestructible soul has consciousness as essential nature and maintains its identity through the process of births and deaths. It will retain its individuality throughout the saṁsāric (worldly)

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[26]Keith, *The Religion and Philosophy of the Veda and Upanishads*, vol. 31, 95-200, 252-401; vol. 32, 433-535.

[27]Paul Deussen, *The System of the Vedanta*, Leipzig: Brockhaus (1897), 1979, 219-254.

existence and also after death. In brief, the souls and the world constitute the eternal and distinct but inseparable modes of the non-dual Brahman.

In the *Gītā*, we find: "The motivation for karma yoga is the 'integration of world' (*lokasaṁgraha*, *Gītā*, 3,25) and even more, 'a passionate concern for the well-being of all things in nature' (*sarvabhūtahiteratah*, *Gītā*, 12,4; 5,25)." Thus, the *Gītā* affirms the stewardship expressed in the Bible.

Overall, the Hindu traditions acknowledge the reality of life, which is identified with the sacred and mysterious power behind matter and empirical experiences. The life of the individual self is viewed in general as a reflection of the divine life animating the entire cosmos.[28]

The correspondence and correlation between the microcosm and the macrocosm remained a parameter for the Vedic thinking of life. The reflections are couched in religious categories. The Upaniṣadic seers intuited the life principle in the human as the Atman and identified it with the Brahman that animates the individual selves and the entire spectrum of beings in the cosmos. The final destiny of the human is to realize this truth of all truths. This has significant implications in our understanding of ecology and its relatedness to life in general and human life in particular. In the orthodox schools, except in the *Advaita* school, strong value is attached to the individual self. What is obvious in the Hindu traditions is the relatedness between life and matter in the cosmos and the ethical imperative for the individual humans to preserve this unity.[29]

4. Ecology and Christianity

4.1. Biblical View of Ecology

The Bible has a clear vision of God, because everything in His creation is stamped with intrinsic goodness and beauty as we repeatedly read in the first chapter of Genesis. There is also a special stress on the integrity and excellence of the whole creation after the creation of humankind (Gen. 1:31). When God sees everything good, His intention is that everything continues to be good.

In Genesis we see that God created the world and humankind and blessed the human community by asking it to multiply, fill the earth, subdue

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[28]Williams, *Religious Thought and Life in India*, 313-350.

[29]For a discussion on the Indian traditions see relevant articles in Priya Ranjan Trivedi, ed., *Eco-Philosophy and Eco-Dharma*, New Delhi: Indian Institute of Ecology and Environment, 1996.

it and have dominion over the creatures of the sea, etc. (Gen. 1:26). Hence, humankind is endowed with special authority and responsibility to relate to every being on the earth with love as God's representative. The human community has to relate to the world in a responsible and harmonious manner by making use of the resources of the earth and, at the same time, preserving the earth and, with it, the other creatures on the earth (Gen. 2:15). The domination of the earth by few nations or few individuals is against God's will and it opposes God's design.

In Genesis 6:6-8, we read about Yahweh grieving at heart and warning because the earth was full of lawlessness with atrocities towards humans and nature. In today's context of globalization and its disastrous impact on environment, we find ourselves in the same situation. The relationship of humans with the environment is explained as follows: both human being (*Adam*) and the trees have been created out of the same substance, *adama*, that is, soil or ground (Gen. 2:9). Similarly, the wild animals (*hayyaat-hassadeh*) too and the bird of the air have been made from the same substance (Gen. 2:19).[30]

We can see in the Old Testament that the Lord, by establishing the Sabbath for the land (Lev. 25:2-5) and by giving so many other eco-friendly laws to the humans, protect animals (Ex. 21:33-34), protect plants (Ex. 22:6), carefully handle bird's nest (Deut. 22:6-7), and used varieties of seeds in the fields (Deut. 22:9). It is a fact that the world in and around us is filled with diverse species from small to big, possess innate goodness and beauty.[31] The opening chapter of Genesis clearly describes how God took six days to fashion this world. God by nature created everything, including humans, in His own image (Gen. 1:26), revealing his creativity and love. At the end of all creation, God found that everything was good and beautiful. Every being on earth finds meaning in God's goodness and beauty. The book of Proverbs would say that He created the earth by His wisdom (Prov. 3:19). The Psalmist has full praise for God for the beautiful creation (Ps. 136).

The creation is, therefore, precious to God and to us. The preciousness of earth is a central theme of the Bible and of all tribal traditions. God was the first to appreciate the worth and the wonder of the earth. God saw that the earth was good (Gen. 1:10, 12); therefore, the earth may not be slighted,

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[30]R. L. Sarkar, *The Bible, Ecology and Environment*, Delhi: ISPCK, 2000, 1.

[31]"The Challenge of an Eco-Just Society" (Editorial), *Vidyajyoti* 65, 3 (March 2001), 163.

abused, wasted, conquered, plundered, privatized, or destroyed. It deserves to be treated with reverence and tenderness.[32] Therefore, the earth is a symbol that sums up all the gifts of life and love, which God shares with human kind, and all living beings.

4.2. The Earth is of God

Everything the earth contains belongs to God. This is the jubilant proclamation of Psalm 24. This aspect is mentioned in the Bible in many places (Ex. 9:29; 19:5; Lev. 25:23; Deut. 10:14; 1 Sam. 2:8; 8:6-9; 47:8; 65:6-14; 50:10-12; 89:12; 95:4-5; Acts 14:15; 17:24-26). In Lev. 25:23, again, the Lord himself affirms that the earth is His. As a fundamental doctrine, this truth was familiar to every Israelite. The earth is the Lord's, because he called the whole world into being. God fashions and names it. The name "earth" is mentioned more than 15 times in the opening chapter of the Bible. The earth is central to God's purpose. The earth is God's cherished bride (Rev. 21:2). "The earth is the Lord's for it is Lord's self manifestation."[33]

Genesis teaches us that the lord God formed us "out of the dust of the ground" (Gen. 2:7, 3:19). Psalm 139 thanks God for fashioning us fearfully and wonderfully "in secret," again "in the depths of the earth."[34] The Old Testament shows nature's link with God who created it, blessed it, and shows him through it. He appears in fire, in wind, and in water. God also uses nature to bring humans closer to him and to punish them when they go astray. Everything in the world, therefore, remains sacred since it is linked with God and leads to him. Various texts in the Psalms (19:1-7, 98:7-9, 104:1-5, 148:3-13) show that all things on the earth are seen as God's handiwork which bring honour and praise to him by their very existence.

4.3. The Earth is Ours

The relation between the earth and the humans is one of respect and love. The earth and the things it holds are not to be taken for granted. The natural resources of God's creation – land, water, air, animal, and plant life are given

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[32]Samuel Rayan, "The Earth is the Lord's," in David G. Hallman, ed., *Eco-theology: Voices from South and North*, Maryknoll, New York: Orbis Books, 1995, 139.

[33]Samuel Rayan, "The Earth is the Lord's," in Hallman, ed., *Eco-theology: Voices from South and North*, 130.

[34]L. Stanislaus, "Ecology: An Awareness for Mission," *Vidyajyoti* 63, 8 (August 1999), 576-587.

to humans to give glory to God. They are not to be treated as if they have no identity of their own, rather they deserve to be recognized, acknowledged, and respected.[35]

In Genesis, God said: "till it and keep it" (2:15); this should be understood not as dominion over the whole world but as stewardship on the creation. Stewardship entails bringing "into play those abilities and gifts which distinguish the human being from other creatures."[36] It involves the caring and responsible management of the sources of the earth. As tenants rather than owners, we humans have a responsibility from and accountability to God – a Theo-centric framework.

God places humans in the garden (Gen. 2:15) and walks in the garden suggesting human divine intimacy in the cosmic family (Gen. 3:8). This biblical vision of harmony is to be realized continuously. All the beings can fulfil God's vision only through co-existence, mutual dependence in harmony and communion, thus, perpetually upholding the single vision of the creator forever. That type of an existence is sustainable development and this is an important element in the Kingdom of God.

Land is one of the most important natural resources of God's creation enhancing life. In the Old Testament, land is a blessing and promise from Yahweh. Therefore, it is sacred and covenantal. It was a free gift given by God to the chosen people in sacred trust to be passed on as a precious inheritance (Lev. 25:28). The land was understood to be a good in itself, not just as a property or a commodity. The prophets railed against those who coveted the land and[37] who ruthlessly exploited it (Mic. 2:1-5; Is. 5:8-10)

Psalm 115 speaks of the earth being given to human beings. We celebrate the earth and in her celebrate her God, our God. Therefore, with all these we are called to reflect on selfishness and greed, which come in our way as a hindrance in praising God and the earth. The recent World Council of Churches reflected on the need for considering creation as a gift of God.

Yahweh through his prophets condemns the rich who oppress and destroy the nature (Amos 4:13; 5:10-12; Mic. 2:1-3; Is. 5:8-10). Representing the people the prophets have stood for an eco-just society and critiqued false

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[35]Judit A. Dwyer, "Questions of Special Urgency," *Theology toward the Third Millennium*, ed., Schulteneuer, Lewiston, NY: Edwin Mellen Press, 1991, 103-123.

[36]Rayan, "The Earth is the Lord's," 134-35.

[37]Marjorie Keenan, *From Stockholm to Johannesburg, 2002*, Vatican City: Vatican Press, 2002.

ideology and corrected oppression. In Micah 4, God promises the people to create them into a new people. In the Old Testament, we see Joel as a prophet of environmental awareness (Joel 1:2-4, 6-7, 9-12, 17-20; 2:2-10). Thus, through the prophets God has upheld an eco-just society in history.

In particular, the Torah refers to duties to the eco-system which sustains life. The land's neglected need for Sabbath is represented as a major reason for the exile of the Hebrews. As we read in Leviticus, "Your land will be deserted...While you are in exile among your enemies, your land will enjoy its Sabbath to the full" (Lev. 26:32-35). Unlike what man does today by polluting, poisoning and raping the earth, God wants humans to mend their ways and consider land as worthy of and in need of God's tender care. Any ecological degradation, any form of imbalance in nature created by humans, discrimination and inequality in human relationships, injustice, and wanton destruction of the ecosystems or depleting the ozone layer, is a destruction of God's creation.

4.4. Jesus Christ, the Ecologist

A serious reflection on the life events of Jesus Christ, his teaching, and his miracles from an ecological point of view is very inspiring. If we can read the gospels from the ecological perspective we can see Jesus as an 'ecologist'. He referred to ordinary creatures such as birds, ravens, sparrows, lilies, grass, etc., to effectively convey his message of concern for the world. He also shared his experience of a loving God dynamically present in the world. He encourages his listeners to have eyes that see and ears that hear the movement of God in the world. Jesus was passing on to his listeners what he had discovered about God's reign in the natural things around him.[38]

The forty-four miracles of Jesus in the gospels reveal His concern for the world as such. Through the miracles Jesus destroys the "domination" of Satan over created realities and establishes the "dominion" of God, which is liberating. In this sense, all the miracles have ecological resonance.[39] The nature miracles (Mk. 4:35-41, 6:45-62) invite us to trust in the absolute power of God in the midst of ecological disasters. The feeding miracles (Mk. 6:32-44, 8:1-10) tell us about the abundant resources of nature, which provide us with food and drink, which need to be evenly distributed according to the needs of the people. The miracles of exorcism (Mk. 4:35-

[38]Stanislaus, "Ecology: An Awareness for Mission," 580.
[39]Stanislaus, "Ecology: An Awareness for Mission," 580.

41) reveal that the cosmic ecological harmony is on the agenda of God who routs the forces of ecocide. The healing miracles (Mk. 5:25-34) call us to be God's stewards in the restoration of the disfigured images of God in creation especially human beings. The resurrection miracle (Mk. 5:21ff., 35-43) challenges us not to be silent spectators of the worldwide ecological holocaust that is taking place but to be active agents in the creation of "a new heaven and a new earth" (Rev. 21:1-4). We see in Jesus a champion of restoration, recreation, reformation, and transformation of the universe. In him we are invited to have a new look at creatures; with him we are called to commit ourselves to their defence.[40]

Pope John Paul II, in his encyclical *Sollicitudo Rei Socialis* on human development, argues that the development of human life through economic and technological progress must be tempered and ordered by a new moral concern both for justice and for ecological limits.[41] Among many other voices, he constantly stressed on the Christian duty of ecological concerns. The Christian community is exhorted to become an ecologically sensitive community.

An illustrious model of ecologically-oriented life was of St. Francis of Assisi, the patron saint of ecology. He loved the creation because in it he found God. Assisi appreciated every creature and viewed created beings as a network of relationships. In a globalised context, we are invited to be prophets of deep ecology like Francis.

5. Conclusion

The foregoing discussion amply demonstrates that if humanity is to survive on this planet, humans have to be very cautious in their relation to nature and environment. He has to live in harmony with all of God's creation. Unfortunately, in the name of religion heinous crimes are being committed. According to Einstein, true religion is concerned with men's attitude towards nature at large.[42] Indeed, as religion exists in nature and nature sustains

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[40]I am indebted to Siji Norokariyil in sharing his notes and for discussion on the theme. See his book *Children of the Rainbow: An Integral Vision and Spirituality of our Wounded Planet*, Delhi: Media House, 2007.

[41]John Paul II, *Sollicitudo Rei Socialis* (Encyclical Letter), reprinted in Daniel J. O'Brian and Thomas Shannon, *Catholic Social Thought: The Documentary Heritage*, Maryknoll, NY: Orbis Books, 1992, 411.

[42]See Albert Einstein, *Cosmic Religion, with Other Opinions and Aphorisms*, New York: Covici-Friede, 1931.

human life, both religion and nature should be inescapable parts of human existence. Life is un-navigable without the malt, sail, and flag of religion and, as life depends on environmental equilibrium, the teachings of religions can be fairly used for developing a concept of eco-spirituality grounded by various religious faith of the world.[43]

The pollution of human mind prejudicial to nature can go only by embedding the precepts of religion; for, religion is a symbiotic relationship between humans and their environment promising a homogenised and congenial ambience. Indeed, if humanity has to survive, it has to draw sustenance of spirituality from religion for assuring eco-friendly universe. This will be the most scintillating ode or tribute to Vyas, Buddha, Mahabir, Confucius, Christ, Mohammad, and Guru Nanak.

A beautiful phrase in Hinduism tells it succinctly: *Satyam*, *Śivam*, and *Sundaram. Satyam* stands for development based on ground realities perused primarily on affordable tapping of natural resources conditioned by geographic, economic, and socio-cultural factualities of earth society. *Śivam* may stand for development for all, more especially of the poor, indigent and deprived sections of humanity. It will prove to be the real solution of the problems of social, economic, political injustices that have divided nations into warring camps and human beings into soulless agents of development seeking survival at the cost of others. The dimension of *Sundaram* may encompass promotion of beauty, environmental quality, and peace, both mentally and materially.[44] Development devoid of these attributes has reduced human beings to soulless mechanical agents intent on causing decline of environmental equilibrium.

The materiality of the modern world causing eco-crisis can be conquered only through discarding lust for amassing unbounded wealth and riches, banishing hatred and ugly competition and adopting love and compassion instead, and by doing good to others, including nature. This was also the *summum bonum* of the Christ's assertions and the exhortations of the sages and seers of Hinduism.

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[43]Rajdeva Narayan and Janardan Kumar, eds., *Ecology and Religion: Ecological Concepts in Hinduism, Buddhism, Jainism, Islam, Christianity and Sikhism*, New Delhi: Deep & Deep Publications, 2003, 25-37.

[44]Narayan and Kumar, eds., *Ecology and Religion*, xxxi.

Journal of Dharma 31, 4 (October-December 2006), 457-472

THE ECO-PNEUMATOLOGY OF RAIMON PANIKKAR

Spiritual Life in the Suburbs

Brad Bannon♦

1. Introduction

Throughout the centuries, Christian theologians have been simultaneously perplexed and inspired by the doctrine of the Trinity. Countless philosophical attempts have tried to balance the Trinity in a complex metaphysics that is static enough to provide meaning but fluid enough to maintain at least an appearance of monotheism. Unfortunately, nearly all of these formulations leave us with an attenuated Spirit and many of them seem to forget the Spirit altogether. Raimon Panikkar, however, has introduced a uniquely *advaitin* Christian perspective to the Trinitarian enigma which takes the role of the Spirit seriously. In the context of a diversified discussion on religion and ecology, this article turns our attention to the role of the Holy Spirit in Panikkar's theology and the promise that such a pneumatology holds regarding ecology.

Inherent in this effort is a more immediate critique of dualism and modernism. The Trinity simply cannot fit into a metaphysical dualism without an imbalance. Modernist ideologies are largely to blame for the environmental crisis confronting our global community. This article is structured with these issues in mind. I begin with Panikkar's 1993 book, *The Cosmotheandric Experience*.[1] These sections demonstrate how logic and reason have gradually devalued *lived* experience, in general, and *religious* experience, in particular. This depreciation of experience has been concurrent with the attenuation of the Holy Spirit in Christian theology as well as in ecology. Because Panikkar emphasizes the

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[1]Raimon Panikkar, *The Cosmotheandric Experience: Emerging Religious Consciousness*, Maryknoll, NY: Orbis Books, 1993.

importance of religious experience balanced with reason and logic, the last portion will focus on the importance of direct experience of the Spirit from the vantage of myth, mystical experience, and prayer. This should provide a basic presentation of Panikkar's eco-pneumatology and his *advaitin*[2] (or, perhaps, *atraytin*) Trinity. To provide us with a contextual grounding, I shall begin with a brief introduction of several of Panikkar's key concepts, principally ecosophy.

2. Ecosophy

Raimon Panikkar is a truly gifted linguist. More often than not, his theology and philosophy resemble poetry more than prose. Unfortunately, this tends to make his writings quite challenging for readers who are not at least somewhat familiar with Greek, Latin, and Sanskrit language and literature. Rest assured, though, that his elucidations are well worth the effort.

One example is his coinage and use of the word *ecosophy*. *Eco* is derived from the Greek *oikos*, meaning house. *Sophy* comes from the Greek *sophia*, meaning wisdom. The term ecosophy, then, carries a double meaning. In one sense, it is the *wisdom* that we have about the Earth (our house). Panikkar, however, employs another meaning of the term. Ecosophy is the *wisdom of the Earth*. This is not a wisdom that we possess, it is a wisdom from which we learn and appreciate, or, at least, we should. If ecology is an active discipline of study and involvement in nature, ecosophy is a passive discipline of listening to nature and recognizing that we are always already involved in nature. Ecosophy is prayerful, meditative, and reflective. This Earthly House in which we live, move, and have our being is wise and has much to teach us, if only we are quiet and patient enough to listen.

As we listen for this eco-Sophia to impart her wisdom, we should learn what we can from both our successes and our shortcomings in the past. In his *Cosmotheandric Experience*, Panikkar identifies three *kairological moments* in our theological history. In Greek, there are two words to designate time: *chronos* and *kairos*. *Chronos* is quantitative and divides time into consistent, measurable divisions (minutes, years,

[2] *Advaita* is a Sanskrit word meaning not-two. Essentially, it refers to the philosophy that even though we experience life as self and not-self, these are not-two different things. *Atraytin* means not-three, referring to the Trinity.

decades, etc.). *Kairos*, on the other hand, is qualitative and refers to eras or epochs in time (Ancient, Baroque, Renaissance, etc.). For Panikkar, the first kairological moment is best represented by St. Augustine. The second moment is the modernist period, beginning with Descartes and Kant. The third moment is well underway, but it depends upon us. For this task, we need both the wisdom of the Earth and the movement of the Spirit.

3. The Ecumenic Moment

First, we encounter the *ecumenic moment*, where the entire cosmos is interpreted to be a living organism. In these philosophies and theologies, St. Augustine, St. Thomas, and others wrestle with the notion of *anima mundi*, or the Spirit/Soul of the World. Although this term hints at a blessed eco-pneumatology, we quickly learn that the Spirit spoken of here is barely a spectre or penumbra. It is a presence devoid of power or influence. The *anima mundi* lures us in with promises of unity and connection, and yet it becomes stifling because it limits the Spirit within the temporal bounds of material creation. This presents us with a cosmological difficulty. The Spirit, conceived as an inner-cosmic principle (*anima mundi*), only vivifies the existing material world, and always in the same way. This limits the creative power of God. Panikkar observes that this makes

> God totally this-worldly – but also stunts any open possibilities for the World to develop and evolve along new and uncharted pathways – [thus,] making the World into a docile instrument of its animating principle or soul, instead of allowing the World to run the risk of creatureliness.[3]

Animated by *anima mundi*, the Earth not only grounds us in reality, but she also yields reality to us. The Earth is the fertile womb of life, but not its source: "She is the womb of beings. She receives the seed of the divine and transforms it into abundant life. The Earth is where – and how – the divine manifests its bounty and its power to Man."[4] This is the power and blessing of the first kairological moment of consciousness, but the reality of the Spirit is too easily conflated with the realness of the Earth. The two must remain interwoven, lest *terra firma* be mistaken for a substance: a wall which separates us from God rather than drawing us into an intimate

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[3]Panikkar, *The Cosmotheandric Experience*, 31.
[4]Panikkar, *The Cosmotheandric Experience*, 138.

connection with God. This is the purpose behind the subtitle of this article, "Spiritual Life in the Suburbs." We must not build a wall, as Augustine has done, by pitting two cities against one another. To live in the *civitate Dei*, or City of God, is to forsake the blessedness and sacred nature of the City of Humanity.[5] Conversely, to search for salvation only in the mind or only in the Earth is equally damaging, particularly if we forsake the presence *and activity* of the Spirit in either.

We are called to rejoice and enjoy the presence of the Holy Spirit of God here in this natural world. By the immanence of the Spirit, we do not live in the city of materiality or in the city of spirituality; our *advaitin* life is lived between these dualities. In terms of Indian philosophy, *Puruṣa* and *Prakṛiti* are not-two. Similarly, the Spirit and Earth are not-two. We cannot say that they are one, because this would be tantamount to pantheism. Instead, by advocating that Spirit and Earth are not-two (*advaita*), we identify God's presence *in* all things (pan*en*theism). We need only to recognize the immanence of God in and through God's created world. Hence, our relationship with Nature is part and parcel of our relationship with God. Indeed, this is what we mean by the term eco-pneumatology, it is what Panikkar means by the term cosmotheandric, and it is precisely what is missing from Augustine's *anima mundi*.

4. The Economic Moment

If the ecumenical moment has imprisoned the Spirit in creaturely immanence, then the economic moment has imprisoned Her in humanity. Panikkar explains: "After Copernicus, the Earth ceases to be the cosmological centre of the universe... Man [*sic*] then steps into the vacuum and becomes the centre."[6] At the same time, Descartes and Kant begin to interrogate the knower of knowledge and question his/her credentials. Descartes initiates for the West what the East had been considering for centuries: that reality is, quite possibly, an imaginative construction of the mind. The result is a slip into a radical Platonic mind/body, subjective/objective dichotomy. During the ecumenical moment, each person was viewed as a microcosm of the universe;

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[5]Actually, Augustine used the term *civitas diaboli*, or City of Demons, by which he meant our Earthly abode. Panikkar notes that these "have ceased to be viable human paradigms." Panikkar, *The Cosmotheandric Experience*, 42.

[6]Panikkar, *The Cosmotheandric Experience*, 36.

Descartes, however, confuses us into thinking that the human person is actually the *macrocosm.* Truth becomes the prisoner of reason and the result is an anthropocentric vision of reality.

Panikkar enlightens us with his playful deconstruction of the word economy. The *nomos* (law) of humanity, becomes its *eco* (house); "his [sic] home is no longer the Earth, which he now exploits for his own purposes, but the ideal world of his mind."[7] The Spirit, once fully incarnate in the *anima mundi*, becomes fully disincarnated. No longer is the future of humankind at the mercy of the Spirit; it is now believed to be fully within the hands of the human person. Philosophers such as Spinoza, Feuerbach, Nietzsche, and others begin to recognize the considerable philosophical and pragmatic problems with anthropomorphic conceptions of God. As we begin to discover the natural and physical properties of nature, God's role and place in human activity is eroded and even replaced by human activity itself. The Holy Ghost is simply another casualty among the apparitions which evaporate into an ethereal mist.

Just as the Copernican revolution left a void at the scientific centre of the universe, the Cartesian revolution left a void at the conceptual centre. For Augustine, the challenge was to reconcile the presence of the Holy Spirit in the *anima mundi* with the transcendence of God. But after Descartes, "reason becomes the Spirit and the Spirit the supreme reality, God... Idealism reigns and the dignity of Man lies in sharing this very movement of the Spirit."[8] But this movement of the Spirit is attenuated; mystical experience is dismissed as intellectual illusion; matter and praxis become enslaved to the limitations of human reason. So long as *anthros* is at the centre, we remain prisoners inside Plato's cave. But, as damaging as such a tear in the cosmic fabric might be, it is also an irreversible fact. Richard Dawkins may find the anthropomorphic God to be a pathological delusion, but this does not mean that the Spirit has lost her place; it simply means that we had mis-placed Her to begin with.

For Panikkar, modernism is not wrong, but the concreteness which we have attributed to it is misplaced and we must move beyond it. Postmodern simply means *after* the modern, but this is not *after* in the chronological, but in the kairological or qualitative sense. This distinction is at the very core of his eco-pneumatology. His postmodernism is a

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[7]Panikkar, *The Cosmotheandric Experience*, 36.
[8]Panikkar, *The Cosmotheandric Experience*, 35.

reaction against subjectivism and scientific determinism, which Descartes called *practical philosophy*. It is primarily this philosophy that has led the world into a state of environmental crisis. One can read the excitement in Descartes' words as he envisions the possibilities of scientific advancement:

> ...knowing the force and the action of fire, water, air, the stars, heavens and all other bodies that environ us, as distinctly as we know the different crafts of our artisans, we can in the same way employ them in all those uses to which they are adapted, and thus render ourselves the masters and possessors of nature.[9]

Doubtless, when he imagined the force of the stars, Descartes did not have in mind an atomic mushroom cloud. Postmodern thought is not opposed to "knowing the force and action" of nature, and for such knowledge we are indebted to science. However, we should not seek to "render ourselves the masters and possessors of nature," but regard ourselves as members of nature who are in communion with nature, with love and respect of God's precious creation, which is filled and fulfilled by the immanent presence of the Holy Spirit.

It is important to clarify, here, that Science, as-such, is not under attack. Panikkar, himself, holds a PhD in Chemistry and, I would imagine, holds the same fascination and enthusiasm for scientific discovery and innovation that most of us do. Neither is logic or reason, strictly speaking, under attack. What is being sharply criticized is the modernist tendency to prioritize logic above human experience and the belief in an objective worldview. What is being sought is recognition of the limitations of logic and science to fully express the nature of the human condition, particularly the nature of the human relationship with the Earth and its inhabitants.

5. The Ecological Interlude

But scientific humanism is only the first movement of Panikkar's second kairological moment. In fact, he feels that signs abound that this modernist period is reaching its end. The human community has grown weary of its alienation from heaven and earth. Humankind has severed itself from an

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[9]Rene Descartes, *Discourse on the Method of Rightly Conducting the Reason in the Search for Truth in the Sciences*, trans. E. S. Haldane and G. R. T. Ross, cited in Jürgen Moltmann, *Spirit of Life: A Universal Affirmation*, Minneapolis: Fortress Press, 1992, 28-29.

unacceptable God. At our Genesis, God began to separate (*bereshit bara Elohim*),[10] and humans have completed this separation with notions of intellectual absolutism. But this is not the end of our economy. We continue to discover the laws of this house.

Modernism has not only damaged Earth and God, it has also damaged the human soul. The Trinitarian balance is more than just a theological construct, it is an *advaitin* sense of holism. Humanism severs humanity both from the transcendent, liberating God above and from the harmonious World below.

> Man [sic] becomes increasingly lonely. He has spread the net of his intelligibility like DDT and killed all the intermediary beings he cannot master with his mind – the spirits, once his companions, are no longer credible, the Gods have flown, and a solitary and ever more superfluous God fades away. Even Nature, on which Man seems to have such an iron grip, now slips from his grasp, both intellectually and physically.[11]

We witness this slipping grasp in numerous postmodernist formations, even at the peak of the modernist movement. Panikkar offers as examples Gödel's theory of *incompleteness*, Einstein's theory of *relativity*, Heisenberg's principal of *indeterminancy*, Freud's and Jung's *unconscious*, Bergson's *élan vital*, Heidegger's *Angst*, and Sartre's *absurde*. These examples represent glimmerings of mystery[12] and the promise of liberation from dualism and absolutism.

During this *ecological interlude*, the optimism so readily identifiable in Descartes' *Discourse* gives way to the sobering realization that humans are not dominators of Nature, but are, in fact, a part of Nature. To dominate Nature with technology is to dominate ourselves. A vital appreciation of ecosophy, the wisdom of the Earth, is needed. We cannot expect God's wise Creation to simply tolerate our perpetual abuse without exacting some price from us in return. The depletion of natural resources, the pollution of rivers, and the dramatic loss of biodiversity are but a few effects of our terrorist attack on Nature's Spirit. For Panikkar, however, this is symptomatic of an underlying crisis of a dualistic worldview.

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[10]Genesis 1:1. *Bara* is traditionally translated as "create;" it also carries the meaning "to cut or divide." See 2 Sam. 12:17; Ez. 21:19.

[11]Panikkar, *The Cosmotheandric Experience*, 41-42.

[12]I am grateful to Catherine Keller for this poetic phrasing.

Patriarchy, objectivism, and domination are symptoms of this dualism. The Augustinian notion of the City of God and the City of Man is a paradigm that has run its course and the course is leading towards self-destruction.

The Cartesian revolution has resulted in a desacralizing of Nature and a disembodiment of the Spirit. This out-of-body experience coincides with a scientific humanism which casts doubt and suspicion (if not outright dismissal) of anything ethereal. Dawkins' *God Delusion*[13] is simply one of countless examples. For many in our society, this spiritual void has been filled with a deeply personal sense of spirituality that seems completely disconnected from this world. The *me-and-my-god* sensibility continues to deny communion with nature or any involvement of the Spirit in this city, the City of Man. Dawkins is right to criticize and Christians should recognize that in our Theandric devotion that we are missing something; in fact, we are missing the World.

For Panikkar, the Trinitarian construction of World-God-Man includes a perichoresis in which humans are invited to the dance. This is well represented in the celebration of the Eucharist. It is through our physical, mental, and spiritual devotion that we are transformed through the work of the Spirit (2 Cor. 3:18). Trinitarian theology is not a passive and transcendent exercise for the sake of sheer academic debate. We are called to be actively and intimately involved. "The whole universe is called to share in the Trinitarian perichoresis."[14]

Before we examine the third movement, we must examine the problems associated with the logic of this household (eco-logic). Panikkar is not only critical of modernism and environmental usury, he is also critical of the ecological movement as it is practised by many environmental activists today. Such ideologies rarely call for a radical reformation of our approach to Nature. Instead, they seek to manipulate and manage Mother Earth more humanely and more rationally. This is, indeed, a welcome change, but the underlying idea remains the same: Earth is not a companion, but a tool. It remains wild and unruly. Such ecologies seek to protect the Earth instead of dominating it, but fall far

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[13]Richard Dawkins, *The God Delusion*. New York: Houghton, Mifflin Company, 2006.

[14]Raimon Panikkar, *Christophany: The Fullness of Man*, trans. Alfred DiLascia, Milan: Jaca Books, 1999 (also, Maryknoll, NY: Orbis Books, 2004), 147.

short of recognizing God's Creation as a fellow creature of Humanity. That is, the Earth was created *for us* and *entrusted to* us, but this is quite different from recognizing that the Earth was created *with* us. The modernist subject/object paradigm persists.

Panikkar identifies the inherent patriarchic attitude of the ecological movement as one aspect of the problem. *Man* still has dominion over *Mother* Nature, but attempts to practise this dominion in a more *responsible* manner. The tendency is to reformulate the style in which we seek to control and manipulate the planet in a way that is more harmonious with nature. This is a vital, if long-overdue, adjustment, but at its core, it is simply a different version of the same approach. A gentle emperor is certainly preferable to a tyrannical one, but both are a far cry from peaceful cooperation and mutual enrichment.

The problem with ecology is simply the complement to what is wrong with anthropomorphic theologies. Subject-object, spirit-matter, transcendent-immanent, mind-body, and other such dichotomies, which are at the core of modernist epistemology, have resulted in the desacralizing of nature and the loss of theological grounding. Ecology and theology have both become so dominated by the human logic, that *Sophia*, the wisdom that only comes from experience, has lost Her place. The challenge that Panikkar proposes is to liberate ecology from the suffocating logic of modernism and to once again prioritize mystical experience. This is certainly not to suggest that we adopt an *il*-logical approach, but rather that we need to adopt an approach that is not dominated by human logic alone. This *ecos* has been here far longer than we can comprehend and it is filled with the presence of the Holy Spirit. Our ecology will be forever enhanced if we simply make room in the discussion for Earth to share her wisdom. Our ecological voices should not be silenced, but they should pause long enough to listen for the ecosophical song.

6. The Catholic Moment

This brings us to the third kairological moment of consciousness, which Panikkar calls *the catholic moment.* This pertains to a consciousness that has neither been attained nor is it fully attainable. However, given the urgency of the global ecological crisis, "futuristic dreams are not enough to save those who will die in the meantime... nothing short of a radical *metanoia*, a complete turning of mind, heart, and spirit will meet today's

needs."[15] So long as policies and praxis approach the situation as Man *toward* Nature, the end cannot be reached. What is called for, instead, is a fully integrated approach towards a new innocence. This is not to be confused with a futile quest to recapture innocence lost, for once innocence has been disturbed, it is lost forever. The innocence that Panikkar intends is an innocence of self.

In the ecumenical moment of consciousness, the knower is concerned only with the known and the unknown. During the economic moment, the knower becomes known and everything becomes suspect while simultaneously becoming enslaved to reason. The third moment now seeks an innocence of self in which the knower is able to focus neither on what is known nor on the *whom* who knows what is known, but beyond both. As Panikkar describes in some detail, to know an apple *qua* apple is to be able to say a great deal about an apple without actually being able to say what an apple *is*.[16] The innocence we seek is not a return to the naivety before the first bite, but instead to be able to see both created and Creator in the apple. For such a *metanoia*, we need the assistance of the Spirit.

7. A Myth and a Mystic

Neither monism nor dualism is adequate to describe such innocence. In fact, nothing is sufficient to describe naivety; for any such description would obviate the ignorance required for such innocence. What we need is either a myth or a mystic. Only a mystic is able to grasp the true value of a myth and anyone who finds enlightenment *through* a myth is a mystic. The *cosmotheandric experience* is nothing less than a myth, and this myth is nothing less than the Spirit. But what is meant by the Spirit? Countless metaphors and descriptions have attempted to answer this question and while all of them may be correct, none of them is complete, even in amalgamation.

To understand the myth of the Spirit and its relationship to consciousness, we must first understand the notion of myth. This, of course, is an inexhaustible concept and one upon which tomes have been written. To glimpse Panikkar's understanding of it, though, we find insight in his *Myth, Faith, and Hermeneutics* (1978). Here we find a helpful metaphor: "You cannot look directly at the source of light; you turn your

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[15]Panikkar, *The Cosmotheandric Experience*, 46; original emphasis.
[16]Panikkar, *The Cosmotheandric Experience*, 48-50.

back to it so that you may see it – not the light, but the illuminated things. Light is invisible. So too with the myth... it is a *sui generis* form of consciousness."[17] We find at the beginning of Aristotle's *Metaphysics* an interesting insight: The myth-lover is a lover of wisdom (philosopher).[18] A living myth cannot be separated from the meaning of the myth anymore than the meaning of *love* can be separated from the experience of love. Similarly, while all myths deserve and require reflection, we can never argue that any particular interpretation is the correct one. In fact, a myth or mystical experience may hold one meaning for me at one time in my life, and hold quite a different significance at another time. Mystical experience neither needs nor accepts intermediaries. The experience itself is the meaning.

Likewise, the *cosmotheandric* experience is a mystical myth. It is *sui generis* and deeply personal while at the same time being universal and inter-relational. What is missing from both monistic and dualistic constructions of consciousness is the mystical and Spiritual union of World (*cosmos*), God (*theos*), and "Man" (*andros*). Only when one is able to see *through* the myth is one able to understand it. In this sense, a myth is like a pointing finger. To see the finger is to miss what it is pointing at. Only when we see past or even through the finger are we able to understand its purpose. To see *through* the myth is to see past oneself and even forget oneself. This forgetting is the innocence of the cosmotheandric experience.

Augustine's twin cities paradigm is not without its merits. The result, however, is nothing short of material reductionism if not material contempt. To foster contempt or fear for Creation is to undermine the wisdom of the Creator and, thus, the wisdom of the Creation (ecosophy). But to move from one city to the other is at least as damaging.

> Spiritual reductionism is as deleterious as material reductionism. Our task is to overcome any and all of these overbearing reductionisms which threaten to confine reality to but one of its constituents... this can only be done if we pierce through our own

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[17]Raimon Panikkar, *Myth, Faith, and Hermeneutics*, New York: Paulist Press, 1978, 4.

[18]ὁ φιλόμυθος φιλόσοφος πώς ἐστιν.

anthropocentric perspective in the ongoing conquest of the new innocence.[19]

8. Christ as the Manifestation of Spirit

Having examined Panikkar's more philosophical description of the cosmotheandric experience, we have better insight to examine the role of the Spirit in its eco-pneumatological application. Six years after publishing *The Cosmotheandric Experience*, Panikkar offered *Christophany: The Fullness of Man.* At the risk of oversimplifying his purpose, we might say that *Christophany* is a uniquely Christian approach to the earlier thesis. It is a direct challenge to the classical approaches to Christology and a simultaneous proposal to view Christ as a myth of microcosm and a vessel for the cosmotheandric experience.

In the preface to his work, Panikkar explains: "The first task of every creature is to complete, to perfect, his [*sic*] icon of reality."[20] He is careful to distance himself from theologies that attempt to universalize Christianity through such paradigms as *anonymous Christians* or fulfilment theory. He writes: "I am not saying that Christ is the fullness of life but that this fullness, effective since the beginning, is one that the Christian tradition calls Jesus the Christ."[21] With these assumptions in mind, we can delve more deeply into his concept of *Christophany.*

In keeping with his earlier commitments to social and ecological justice, Panikkar identifies another aspect of our task. Our hermeneutical circle must consider the lived experiences of men and women of all cultures. This is not to suggest that it must attempt to formulate itself in a way that is acceptable by all people, or even in a way that includes all people; but it should not be deaf to the cries of the oppressed or blind to the Truths found beyond its scope.[22] Essentially, Christophany differs from Christology because it is open to the experiences of humanity and the experiences of the cosmos. It is, indeed, a mystical experience of Christ. "Christophany takes nothing away from Christology but is open to the reality of the Spirit, which, without separating *logos* from *pneuma*, does

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[19]Panikkar, *The Cosmotheandric Experience*, 58.
[20]Panikkar, *Christophany*, xx.
[21]Panikkar, *Christophany*, xx.
[22]Panikkar, *Christophany*, 5.

not subordinate the latter to the former."[23]

The experience of Christ is irreducible to logic and reason. Logic can only reflect upon experience or upon reason itself, which is ultimately rooted in experience. But life is much more than reflection upon life; it is also about the lived experiences that flourish both before and after reflection. In Heideggerian terms, to whatever extent life is about Being, it is always already about Being-in-the-world. The hermeneutics of experience, of religion, or even of logic and reason, is always limited by language itself. Language can never be anything more (or anything less) than symbolic. However universal our language might be, logic can only approach universal problems in a concrete and, therefore, limited way.[24] Symbols and myths are the very language of faith.[25]

Christophany does not replace or supplant logic. Quite the contrary, it approaches the *logos* in a presence that is open to the activity and influence of the Spirit. It seeks not only to reflect upon Christ in a philosophical manner, but to be receptive to the actual manifestation of Christ. The Greek *phaneros*, manifestation, concerns the direct appearance of Christ to the human consciousness. The word comes from the Greek root, *phos* meaning light. This represents the *new innocence* of the cosmotheandric experience.

Prior to the moment of reflection is a moment of complete and naïve union. For example, in the instant that a person sees an apple, the person and the apple are one. The apple is not first experienced as something other; it is first experienced within the mind and is only then reflected upon and determined to be something other. Similarly, when Christ is first considered, prior to reflection, Christ and devotee are one. Christ is the light, the *phos*, which acts upon the person in a prehensive union: an *advaitin* experience. At this moment of innocence, the devotee becomes not simply a knower of Christ, but a manifestation of Christ... a Christophany. But is such an innocence lost the moment it is gained?

9. Prayerful Openness to the Spirit

It would seem from this description that Christophany can only be a passive experience. In a sense, this is true, as it is true of mystical union in

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[23]Panikkar, *Christophany*, 10.

[24]Panikkar, *Christophany*, 9.

[25]Paul Tillich, *Dynamics of Faith*, New York: Harper & Row, 1957, 58.

general. Reflecting upon Anselm, Panikkar notes that Christology is *fides quaerens intellectum*; it is faith seeking to understand. Christophany, on the other hand, is better described as *fides petens intellectum*, faith praying for understanding.[26] Initially, this is a passive experience, in the same way that mystical experience tends to call for an openness of self, a self-withdrawal. But passiveness is not to be confused with inaction. It is a contemplative attitude in anticipation of the *pati divina*, or "impact of the divine factor."[27] It is an active withdrawal or projecting-opening of the self and a welcoming of the Spirit.

Through this lens, we can better understand the activity of the Spirit in John 14:6. In the Christophanic experience, Christ is not merely an historical person that revealed to us the way, the truth, and the life. Because Christ is eternally manifest, Christ *IS* actually the way, the truth, and the life. Such an understanding, which happens to be a much more literal interpretation of the text, is a hermeneutic which takes into account the lived experiences of men and women of different cultures or traditions. This Christophany also takes the divine incarnation and the Spirit of Christ more seriously than, perhaps, some other interpretations which seek a broad notion of salvation, because Christ *is* the way, the truth and the life; the way and the truth and the life *is* Christ. Jesus, as an historical figure, can only be *venerated* as the fully incarnated Spirit of God. But, when we allow ourselves to be open to this same Spirit, then we are able to experience the manifestation of Christ and receive the Spirit of Truth within ourselves (John 14:17). What Panikkar offers cannot properly be called a Pneumatological Christology, it is a Pneumatological Christophany. That is, it is an openness to the Spirit (*pneuma*), which manifests (*phania*) Christ and invites meaning-giving reflection (*logos*) upon that experience.

From this vantage point, we see that Christophany is concerned with both the *manifestation* of God (in Man) and the *divinization* of Man (in God). It is an experience of mutual enrichment and *advaitin* mysticism. But this is not an ontological change; it is an ontological revelation. Further, this revelation is hardly complete if we stop at this juncture. The Christophanic experience is certainly not modernist, in the manner that it was described earlier, but it is quite subjective, nonetheless. The missing

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[26]Panikkar, *Christophany*, 11.
[27]Panikkar, *Christophany*, 11.

element is the *tatva*, the *that-ness* of manifestation.

In the *advaitin* tradition, into which Panikkar is certainly well placed, there are several great sayings, or *mahāvākyāni*. One is *Aham Brahmāsmi*, which is well represented, I think, in the Christophany as it has been described here. But the *advaitin* (non-dualist) cannot and must not stop here, and Panikkar certainly does not make such a mistake. Another of the great sayings is *Tattvam asi*. This reminds us that this great Creation, this material world, both fully animated and seemingly inanimate, are manifestations and signs of God. Panikkar reminds us that this material world is both restored and redeeming, if not by virtue of Creation, then certainly by the resurrection of the flesh.[28] We cannot isolate the moments of the Cosmotheandric experience anymore than we can isolate the persons of the Trinity. Through the work of the Spirit, every experience of Christ is a cosmotheandric experience as is every authentic Being-with the Natural world. Such an experience cannot be reached through *ecumene*, economy, or ecology, but such innocence is the very essence of eco-pneumatology.

Christ is, at once, creator, redeemer, and glorifier. We must not allow these concepts to become separated in our understanding of them because to do so would not only damage our doctrine of Christ's unity, but would also undermine the role that *we* have to play and isolate the involvement of the Spirit. We cannot simply admire Christ from afar or venerate and pray to an ancient symbol. Instead, we are called to recognize the very manifestation of Christ in all persons and in all things, including and especially ourselves. Such a manifestation, such a divinization is, in no way, an egoistic deification; it is a death of ego and a withdrawal of self as an invitation for the Spirit to manifest. To whatever extent we share love, sympathy, suffering, and joy with our neighbours, be they rich or poor, near or far, Christian or non-Christian, to that extent we discover the true face of Christ that is in all of us.[29] We are reminded of Matthew 25:40: "just as you did it to one of the least of these who are members of my family, you did it to me." From the Christophanic perspective, this is not a metaphorical or symbolic statement; it is a literal and ontological statement concerning the very nature and manifestation of Christ in this world and our responsibility thereto. Ours is an eco-pneumatological responsibility.

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[28]Panikkar, *Christophany*, 181.
[29]Panikkar, *Christophany*, 168.

10. Conclusion

The quest for a responsible environmental ethic and an in*Spiring* eco-pneumatology is perpetual and multifaceted. Hence, as we arrive at the end of this dialogue with Panikkar, we are reminded of the need to return, once again, to the beginning of our endeavour. We examined three aspects (moments) of the *logic* and *reason* of the Spirit. Next, we examined three methods to *experience* the Spirit. Prior to both of these efforts, though, we recognized the need to prayerfully listen and open ourselves to receive the ecosophy, the wisdom of the Earth. We have recognized our role as caretakers of this household, but the time has come for a radical *metanoia* in which we begin to recognize the Earth as caretaker of us and of the countless organisms that are equally cared for by this Mother Earth. This is not a call to abandon the logos of Christology, Pneumatology, Theology, and the other-*logies*, but it is a call to recognize their limitations and embrace the wisdom of this *oikos* in our daily experiences of the Spirit. It is not a call to abandon "the City of God" or "the City of Man," but to experience Spiritual life in the suburbs. Ultimately, this house belongs to *Sophia*.

Journal of Dharma 31, 4 (October-December 2006), 473-484

'TAPOVANAM' AND ECO-SURROUNDINGS

A Study on Kālidāsa's *Abhijñāna-Śākuntalam*

Jojo Parecattil♦

1. Introduction: *Vande mātaram*

Bankim Chatterji's "*Vande mathāram*" echoes the echo-centeredness of Indian heritage:

Vande Mātaram
Sujalām, suphalām, malayaja śitalām
Sasyaśyāmalām mātaram.[1]

The earth is adored and idealized as a mother and from ancient time onwards, India has shown such respect and repute towards her. From time immemorial, India has preserved the interconnectedness and interdependence of the human kind with the cosmos. The *maharṣis* and *saptarṣis* are representatives of our heritage who attained this cosmic harmony. They transcended the world of created variety into a higher form and perceived life in its totality and perfection. But today we are going far away from nature and live completely in our own artificial worlds. More than that due to the over exploitation of the natural resources our planet earth is getting worse and is almost facing a natural catastrophe. Hence, it is high time to return to our echo-heritage and re-capture those age-old eco-friendly cultural paradigms and traditions for renewing the earth as a bio-spiritual planet. In this context, here is an attempt to envisage the eco-surroundings of our Indian *Tapovanam*, with the help of Kālidāsa's *Abhijñāna-Śākuntalam.*

2. Tapovanam

The very word *tapovanam* (grove or 'penance forest') is very much ecological and it embodies the very spirit of India. It is a hut or cave in the forest, where a

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[1]"I bow to thee Mother / Richly-watered, richly furnished South / Cools with the winds of the Dark / with the cross of the harvest / The Mother!" Bankin Chandra Chatterjee, *Anandamatha*, 1882.

sādu (a religious mendicant) usually dwells and is considered as the cradle in which Hinduism grew up. In India, a hermitage is called differently as *āśrama*, *maṭ*, *tapovanam*, *parṇaśāla*, *munistāna*, etc. Each term emphasizes one or the other aspect of life in hermitage. *Tapas* means heat, glow, austerity, or mortification. In the hot climate of India, heat became a symbol of struggle and mortification. Thus, *tapas* is an intensive spiritual exercise undertaken in the burning desire to realize God. According to Hindu *Varṇāśramadharma*, everyone, after discharging all the duties of a householder, should retire to forest as a preparation for the final stage of *sannyāsa*. *Tapovanam* is a place where spiritual seekers gather and begin to meditate in solitude on higher spiritual things. "Hinduism is developed by these sages who meditated on the meaning of life and death in the calm atmosphere of their *āśramas* in the forests. Most of the religious classics of Hinduism were written by these sages who lived in their forest dwellings."[2]

Tapovanam did not stand for inaccessible jungle far away from human habitation. They were easily accessible by chariot and were close to cities and main roads. Different kinds of people and even the kings went there for their spiritual edification and enrichment. It is held that the educational institutions in ancient India were situated in such forest hermitages. Usually, they were situated on the banks of rivers or lakes, and in peaceful groves of trees. In such surroundings, the steadiness of the mind, which is the object of penance, can be easily attained. According to Kālidāsa, through *tapas* not only steadiness of the mind, but the highest knowledge is also attained. The extraordinary genius of Indians in philosophical thinking is an outcome of such echo surroundings. S. Radhakrishanan, too, acknowledges it:

> The huge forests with their wide leafy avenues afforded great opportunities for the devout soul to wander peacefully through them, dream strange dreams, and burst forth into joyous scenes of nature acquire inward peace, listening to the rush of minds and torrents, the music of birds and leaves and return whole of heart and fresh in sprit. It was in the *āśramas* and *tapovanams* or forest hermitages that the thinking men of India meditated on the deeper problem of existence.[3]

Thus, according to Radhakrishanan, the echo surroundings of Indian *tapovanam* were an important factor for its enlightened spirituality and high

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[2]Jesu Rajan, *Bede Grafiths and Sannyasa*, Bangalore: ATC, 1989, 21.

[3]S. Radhakrishnan, *Indian Philosophy*, vol. 1, New Delhi: Oxford University Press, 2004, 22.

philosophical thinking; so also, due to such qualitative enrichment, today they remain as symbols capable of nurturing serious reflective thinking. Therefore, such echo settings should be attached to our surroundings too.

3. Kālidāsa: A High Priest of Nature

Kālidāsa, the greatest of all Indian poets, is a poet of nature. He is a true devotee and worshipper of nature. His attitude towards nature is very peculiar and novel. He has unlimited knowledge about Indian geography and its naturalistic peculiarities. "The sandal of Kashmir, the pearl fisheries of the Tamraparni the deodar of the Himālayas, the betel and coco-palms of Kalinga, the sand of the Indus, all are familiar to him."[4] In his works he portrays them with a loving passion. According to his philosophy, nature is the embodiment of divine spirit. The whole world of created beings is permeated through the same eternal spirit and is grounded on oneness of its cause. It can be observed from the invocation of *Śākunatalam*, which is usually performed by Sanskrit authors for the purpose of the successful completion of a work.

> That which is the first creation of the Creator; that which bears the offering made according to due rites; that which is the offerer; those to which make time; that which pervades all space, having for its quality what is perceived by the ear; that which is the womb of all seeds; that by which all living brings breath; endowed with these eight visible forms, may the supreme Lord protect you![5]

This benedictory stanza praises God Śiva and invokes his blessing and protection. Its meaning can be summarized as "May God Śiva, pleased, protect you with his eight manifested forms." These eight manifested forms corresponded to the eight visible forms, viz., water, the sun, the moon, earth, fire, air, ether, and the breath. According to the *purāṅic* conception of the creation of the universe, water was created first. *Agni* does the duty of delivering the offerings to various gods. The day and night is calculated by sun and moon and, therefore, they make time. The object of sound characterizes either. The source of all seeds is the earth. Beings have life in them because of the five vital breaths, i.e., *pārṅa*, *apāna*, *vyāna*, *udāna*, and *samāna*. The existence of God is inferred from these forms, which are directly perceived. Through this prayer Kālidāsa establishes the essential unity of the

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[4]Sarma, *An Interpretative Study of Kālidāsa*, Calcutta: Chowkhampa, 1968, 216.

[5]C. R. Devadhar, *Abhijñāna-Śākuntalam of Kālidāsa*, Delhi: Motilal Banarasidas, 1991, 3.

entire creation with the Supreme Being. Not only humans, but also the entire created order is made in God's image. Of course, it does not deny the fact that humanity holds a privileged position in the midst of the biotic community created by God. What the poet believes is that God shines through all the objects of nature and there is a profound interdependence between the creator and creation. In the coming pages we shall see how he explains this interdependence.

4. *Abhijñāna-Śākuntalam*

Kālidāsa's love for nature reaches its qualitative and evocative zenith in *Śākuntalam*, which is the last and the best of his plays. It is regarded as a masterpiece in the whole range of Sanskrit literature. It is one of the first works of Indian literature, which became known to Europe. Goethe has all praise for it: "In case you desire to rejoice in the blossoms of early years, the fruit of the age advanced, in case you want to call both the heaven and earth by a common name I refer you to the '*Śākuntalam* and, thus, I describe these all."[6] According to Indian *paṇditās*,

Kāveṣu nāṭakam
tatrā ramyā śākuntala
tatrā ramyā ścaturthonkās-
tatrāpi śloka catuṣṭayam

Among different types of poetry, drama is the most beautiful; among the dramas, the *Śākuntalam* in it, the forth act, and there too the four famous *ślokās* are the best.[7] It is a portrayal of human emotion on the canvas of natural loveliness. The width of Kālidāsa's knowledge and the depth of his observation of nature and life are shown to the highest advantage. According to Goethe, "it contains the history of a development – the development of flower into fruit, of earth into heaven, of matter into spirit. It elevates love from the sphere of physical beauty to the eternal heaven of moral beauty."[8]

The plot of the drama is taken from the *Śākuntalopākhyāna* that occurs in the *Ādiparva* of *Mahābhāratha*. The play falls into three divisions, each having a distinct atmosphere of its own. The first four acts constitute the first

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[6]*Encyclopedia of Indian Heritage*, 2000, s.v. "Classical Dramas of Kālidāsa Harṣadeva, Bhavabhūti and Bhaṭṭa-Nārāyaṇa," vol. 65, 104.

[7]*Encyclopedia of Indian Heritage*, 2000, s.v. "Classical Dramas of Kālidāsa Harṣadeva, Bhavabhūti and Bhaṭṭa-Nārāyaṇa," vol. 65, 105.

[8]Devadhar, *Abhijñāna-Śākuntalam of Kālidāsa*, xxviii.

division, the fifth and sixth the second, and the seventh act the last. The hermitage of Kaṇva is laid as the scene for the first four acts, and here Kālidāsa gives a wide description of the eco surroundings of an Indian hermitage. It is also continued in the final act, where he portrays the *Mārichāśrama.*

5. The Tranquillity of Kaṇvāśrama

The play begins with the hunting expedition of the king Duṣyanta in the forest near the hermitage of Kaṇva. From the forest, gradually, he approaches to the hermitage:

> Under the trees are the grains of wild rice fallen from the openings of the hollow trunks filled with parrots; in other places are seen the polished stones which have bruised the fruit of the Ingudī; and the fawns, too from having acquired confidence bear the sound without varying their course; and the paths of the reservoirs are marked with lines by the drippings from the fringes of bark-garments (I.14).

Seeing them, which are marks of a typical *āśram*, the king concludes that surely it is a hermitage. The *Āśram* is situated on the banks of the river Mālinī. The Ingudī fruit is commonly used by the ascetics for extracting oil, which is used for lamps. Parrots are not disturbed by the noise of the chariot, because of the sense of security created in them by the affectionate behaviour of the sages. According to Indian understanding, an *āśram* is a place where all kinds of people can go at any time and be there, at their disposal. In that atmosphere, they are free and enjoy all kinds of freedom and happiness. The animal world is also not an exception to this. It's an abode of universal love and brotherhood. The whole atmosphere is fragrant by their contact with the trumpet flowers. Moreover,

> The roots of yon trees are bathed in the waters of canals which quiver as the wind plays upon them; the glowing lustre of the fresh leaves is partially obscured by the smoke that rises from clarified butter; and grazing without fear on the garden-grass have been cut away. How tranquil is this hermitage! (I.15)

It again describes the features of the vicinity of the hermitage. The smoke that rises from sacrifices is the symbol of the prayer that rises from human heart. In other words, an *āśram* is always regarded as a centre of deep prayer and spirituality. Kālidāsa regards an *āśram* as another heaven. In the seventh act,

through the words of Matali, he expresses it: "how grand, how noble is the earth!" The king is also having the same opinion:

> It's a place more delightful than heaven. Indeed I am looking on with amazement. Here in this forest of Kalpa-trees, they draw from air life's necessary sustenance; in waters yellow with the golden dust of the lotus, they perform ablutions for religious vows; on jewelled slabs, they meditate; and restrain their passions in the midst of celestial nymphs: they practise penance in a place which other sages by their austerities seek to win (VII.12).

6. Eco-Fraternity

A close reading of the text can further support the idea of the interdependence of humans with creation. For example, see how the hermits appeal to the king for the life of animals:

> "O king that is a deer of the hermitage; he must not be slain, he must not be slain. Not indeed, must this arrow be allowed to fall upon this tender body of the deer, like fire upon a heap of flowers" (I.10).

These words remind us of our serious obligation to respect and watch over the animals and everything in nature with care, in light of that greater and higher fraternity that exists within the cosmic family. The 'king with his weapon' can be seen as a symbol of modern man with all his advanced tools. When man was merely a hunter with primitive weapons, he did not wipe out natural resources and a vast number of animals. Today, however, his weapons are becoming more and more deadly. The chemicals and the fertilizers that modern man uses in the fields are washed into the streams and rivers, and then into the lakes and seas. Thus, they poison the water and kill the fishes and other creatures too. Hence, the call from the hermitage should be interpreted in this wider context.

Killing is the root of all evils. The Sāṅkhya, the Yoga, Buddhism, and Jainism agree on this point. The remedy suggested by them is absolute non-injury or *ahimsā*. "Non-injury (*ahimsā*) consists in the absence of cruelty to all creatures in all possible ways and at all times. It is tenderness, good will, and kindness for all living beings."[9] Thus, *ahimsā* is the root of all other negative and positive virtues. Negatively, it means non-violence, non-injury to living beings in deed, word, and thought. Positively, however, it is universal love. A *sannayāsin* practises such *ahimsā*, which is total love for all creatures. He

[9]Judunata Sinha, *Indian philosophy*, vol. 2, Delhi: Motilal Banarsidas, 1999, 51.

devotes himself to the wellbeing of not only human beings but all the living creatures. "His practice of *ahimsā* leads him to express his contemplative experience of God in active service to all creation"[10] Again, if we observe the conversations of the servants, we will come to know how the hermits love and look after the plants and creepers of the *āśram*!

> Anasūuyā: "Friend Śākuntalā, I think the trees in the hermitage are dearer to father Kāśyapa than your own self, since he has appointed even you, who are soft like a Navamālika flower to fill their basins."
>
> Śākuntalā: "It's not only in obedience to our father, but I really feel the affection of a sister for them."

In anther occasion, she says: "I shall even forget my own self for the sake of the plants." The serene life depicted in the hermitage seems to communicate that all of them saw the self in all beings and all beings in the self. Naturally, every creature in this universe is a manifestation of the divine for them. Hence, they cannot isolate themselves from the rest of the creation. Thus, Kālidāsa describes them as the true models of genuine and deep love for the integrity of creation.

7. Responsibility of the Rulers

The play also speaks about the responsibility of the rulers to look after the nature. For example, analyze the servants' plea to the king: "Holy groves are to be protected by the king." To this King responds: "Ye, hermits keep close at hand defending the creatures in the grove and forbidding my soldiers to vex this hallowed grove."[11] By this the king promises safety to all created beings. *Avanīpati* is the other name for king. *Avanī* means earth and *pati* means husband.[12] Thus, according to the tradition depicted by Kālidāsa, a king is the husband of earth and, hence, he should consider and look after her as his own wife. So great is the love and duty of a ruler and he can never ignore it.

Kālidāsa takes special interest to show the respect of rulers towards *āśram* and its inhabitants there. For example, consider the following:

> King: "Let the dwellers of the sacred grove be not disturbed. Stop the chariot just here that I may descend."

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[10]Rajan, *Bede Graffiths and Sannāyasa*, 70.

[11]Devadhar, *Abhijñāna-Śākuntalam of Kālidāsa*, 89.

[12]In Indian tradition, a king is supposed to consider his kingdom or country as his second wife, by which is meant that the king has to love and protect the kingdom just as he would do with his beloved wife.

> King (having descended, and looking at himself): Charioteer, sacred groves must indeed be entered in humble habiliments; therefore, take these (giving his ornaments and bowing to the charioteer).

The hermits are sure to be disturbed in their daily routine by the unusual advent of the king in his chariot. That is why he refuses it and wears the dress of a humble ordinary gentleman.

8. Atmospheric Subjectivity

Śākuntalām is a portrayal of human emotions on the canvas of natural loveliness. In it nature is the background for reflecting human emotions. This 'atmospheric subjectivity' is one of the features of Kālidāsa's nature poetry. According to him, "nature is not something outside of man with a life-spirit and purpose of its own; but it is a background for reflecting human emotion."[13] For example, to describe the love of Duṣyanta towards Śākuntalā, Kālidāsa first creates a background with nature.

> Śākuntalā (approaching the creeper and looking at it she says): "Friend, at a charming season, indeed, has the union between the pair – the creeper and the tree – taken place. Vanajyotsnā shows her youth in her fresh blossoms; and the Sahakāre his readiness to enjoy, in his sprouting young leaves."
>
> Priyaṁvadā (smiling): "Do you know, my Anasūuyā, why Śākuntalā is gazing so intently at Vanajyotsnā?"
>
> Anasūuyā: "No, I cannot guess. Pray tell me."
>
> Priyaṁvadā: "As the Vanajyotsna is united to a suitable tree, thus, may I too, hope for a bridegroom to my mind."

The union of creepers and trees indicates that the union of Śākuntalā with somebody is long overdue. All the actions of human life are effected in nature. By incorporating such atmospheric scenes to the play, Kālidāsa "has fully painted all the blandishments, playfulness and fluttering of the intoxicating sense of youth."[14] Not only that the atmosphere in the hermitage has a definite influence in concretization and sublimation of the sentiment of love. The idea of love is fostered and nourished by nature and is given a concrete form. This atmospheric subjectivity can be observed in the sixth act in another form.

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[13]Devadhar, *Abhijñāna-Śākuntalam of Kālidāsa*, xx.

[14]Devadhar, *Abhijñāna-Śākuntalam of Kālidāsa*, xx.

When the king forgets Śākuntalā due to the curse of Durvāsa, their separation is reflected in nature too:

> The mango-buds, which have long appeared do not yet form their own pollen; the Kurabaka flower also, though all-ready to bloom, remains in the state of a bud; the voice of the male-cuckoos, though the cold season is gone, falters in the throat; while I suspect even Smara, being awed, replaces the shaft half-drawn from his quiver (VI.4).

What a fine and moving irony is there! It gives us rude shock. By drawing on the natural but unnatural scenes and with such touches as these, the poet prepares us for the crises for which he has secured an effective setting.

9. The Farewell of Nature

The scene of the fourth act is one of the most masterly scenes in the whole range of literature. Here, nature not only echoes the feelings of the persons and even the progress of the thought but also effectively partakes of man's joys and sorrows. Kālidāsa vividly depicts it during the farewell of Śākuntalā when sage Kaṇva ordered to bring flowers for Śākuntalā from the trees at that time:

> By a certain tree was exhibited an auspicious silken garment white as the moon; another distilled the lace-dye so excellent to stain her feet; and from others were presented ornaments by fairy-hands extending as far as the wrist that rivalled the first sprouting of delicate leaves of those trees (IV.4).

The minds of all the inmates of the hermitage are overcast with grief and sorrow. Look at the thought of Kaṇva: "This day Śākuntalā depart: at such my heart is smitten with anguish; my voice is choked by suppressing the floe of rears; and my senses paralyzed by anxious thought" (IV.5). Nature has also partaken in it; it is very clear from the following statements:

> Priyaṁvadā: "It is not our friend alone [Śākuntalā] that is grieved at the separation from the penance forests; the same is seen to be the condition of the penance-forest also, whose separation from you is at hand: the female deer have dropped down their cud of darbhā grass; the peacocks have given up their dancing; and the creepers with their yellow leaves falling off, seem as if to be shedding tears" (IV.11).
>
> Śākuntalā also testifies to it: "Look, friend, the female Cakravāka, not perceiving her dear mate when only hidden behind lotus-leaves is crying in her anguish 'how hard is my lot'!" (IV.14).

Nature has a responsive character and it readily responds to the feelings and sentiments of the human heart. "Life here in the *āśrama* has so intimately been linked up that no thread for discrimination between plant and animal life, on the one hand, and human life, on the other, is left."[15] The jasmine creeper has acquired for Śākuntalā the same sisterly concern as Anasūuyā or Priyaṁvadā. Therefore, she is to take leave of her as she has taken leave from Anasūuyā or Priyaṁvadā.

> Śākuntalā (remembering): "Father, I will bid adieu to my creeper sister Vanajyotsna."
>
> Kaṇva: "I am aware of your sisterly affection for it. Here is it to your right."
>
> Śākuntalā (approaching and embracing the creeper): "O Vanajyotsna, although you are united with the mango-tree, do you embrace me, in return, with your arm-like twigs that point in this direction. From today I part from you."

Thus, Kālidāsa has eliminated all difference between the so-called sentient and insentient objects, and sometimes insentient objects are over-dominating the other. Nature speaks more loudly than human tongues in Śākuntalam. That is the beauty of Śākuntalam.

10. Kaṇva as a Great Patriarch of Nature

According to Belvalkar, nature not only speaks but also is the source and inspiration of human thoughts.

> The thoughts and impulses that man is apt to derive from nature, she really has the power to communicate to him because between nature and man there is at work one self-same soul or spirit, so that an inward communion between the two is as readily and legitimately possible as between two sympathizing human friends; and for such communion, there is not always required the use of articulate language.[16]

The sage Kaṇva is presented as a divine connecting link between nature and human life. For him, the whole creation including the vegetative kingdom is living and vibrating with the cosmic harmony and there is no difference between Śākuntalā and the Navamālika creeper. Both have been fostered up with the same care and concern. "He rises above the petty distinction of a tree

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[15]Sarma, *An Interpretative Study of Kālidāsa*, 218.

[16]S. K. Belvalkar, *Śakuntalā: the Child of Nature*, part I, 9, cited in Sarma, *An Interpretative Study of Kālidāsa*, 227.

and a creeper, a bird and a beast, a man and a God."[17] The mind of the sage Kaṇva is highly integrated. With the trained and integrated mind he can divinize the nature of things:

> "The resonant and ever-vibrating heart of the sage has become susceptible to the slightest movement in the external nature. This has found expression in his sensitiveness to the call of the cuckoo."
>
> "Here is Śākuntalā permitted to depart by the trees, her companions during her residence in the forest, since the sweet note of the cuckoo has been employed as a reply to them" (IV.10).

To an ordinary man a call to nature to approve of the departure of Śākuntalā for her husband's home never contemplated of issuing that call to nature. This has become testimony to the high significance, which Kaṇva has witnessed in creation. Therefore, we see that all his addresses to nature are marked by a certain dignity; it is characterized by an utter want of self-centeredness.[18] Kaṇva has developed a love for nature, which has deeply rooted itself in his heart. So, it is genuine and not moved by any superficial beauty. Training of the mind – a detachment developed through non-selfishness helps realization of the nature of the world. This helped Kaṇva to comprehend the real nature of worldly things in a detached way. Kaṇva has perceived life in its grandeur of totality and perfection. In the play, he is seen in the midst of innumerable diversities of life and creation. To him the whole creation, including the vegetative kingdom, is living and vibrating with the cosmic harmony. The vibration of the vegetative life has raised a wave of similar sensations in man and has founded life on a unity of experiences as it were.

To the sage Kaṇva, there is no difference between Śākuntalā and the Navamālika creepers. Both have been fostered up with the same care and affection. Kaṅava has seen it clearly that the same sprit has permeated through the entire creation, vegetative and human. This understanding of creation, in its true bearings, has enabled him to rise above the petty distinctions of a tree and a creeper, a bird and beast, a man and a god.

11. Conclusion

Spirituality is oneness to reality and reality is a network of relationships: cosmic, human, and divine relationships. Raimundo Panikkar better expresses

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[17]Sarma, *An Interpretative Study of Kālidāsa*, 219.

[18]Sarma, *An Interpretative Study of Kālidāsa*, 122-123.

it as "the cosmotheandric relationships."[19] Ancient Indian ashrams were *cosmotheandric* centres of holistic spirituality and they reflect the beauty and vitality of Indian life and culture. As the Greek word '*oikos*' (from which the word ecology is derived) indicates that Indian *āśrams* are houses of ecological bearings. There is a cosmic unity in which man and nature are sustained by the all pervading spirit. The *Maharṣis* are architects in building up an echo-sensitive culture that can live in harmony with all creations. As an after effect of it, gradually, the whole country became a sanctuary. As Bede Griffiths puts it,

> The earth is sacred and no ploughing or sowing or reaping can take place without some religious rite. Eating is a sacred action and every meal is conceived as a sacrifice to God. Water is sacred and no religious Hindu will take a bath without invoking the sacred power of the water, which descends from heaven and caught on the head of Shiva, is distributed in the fertilizing streams of the Ganges and other rivers. Air is sacred, the breath of all life which comes from God and sustains all living creatures. Fire is sacred, especially in its source in the sun, which brings light and life to all creatures. So also with plants like the tulsi plant and certain trees like banyan. Animals are sacred, especially the cow which gives her milk as a mother, but also the elephant, the monkey and the snake. Finally, man is sacred; every man is a manifestation of God but especially a holy man, in whom the divine presence can be more clearly seen.[20]

In short, there is a story behind the story. Through the story of *Abhijñāna-Śākuntalam* Kālidāsa tells us the story of the echo-surroundings of Indian *Tapovanam*; through the Kaṇvāśrama he tells about those sacred places of India that existed in time and space whether we may believe it or not; through the sage Kaṇva he tells about the great *Maharṣis* of the Indian tradition. Indeed, in many respects the teachings of *Śākuntalam* are very much ecological and, thus, a challenge to our modern times.

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[19]Raimundo Panikkar, "Colligite Fragmenta: For an Integration of Reality," in *Alienation to At-Oneness*, eds. F. A. Figo and S. E. Fittipaldi, Willanova, Penn.: Willanova University Press, 1977, 19.

[20]Bede Griffths, *The Marriage of East and West*, London: Fount Paperbacks, 1983, 10-11.

Journal of Dharma 31, 4 (October-December 2006), 485-496

PURE WATER IS THE FUNDAMENTAL RIGHT OF ALL

S. M. John Kennedy♦

1. Introduction

In 1995, the then World Bank Vice President, Ismail Serageldin said: "If the wars of this century were fought over oil, the wars of the next century will be fought over water." It is deeply disturbing to realise that with each passing day our deepest worry is the future of the planet's fresh water supply. "Fierce national competition over water resources has prompted fears that water issues contain the seeds of violent conflict," Kofi Anna, Secretary General of the United Nations said in a message for World Water Day (March 22, 2002). "But the water problems facing our world need not be only a cause of tension; they can also be a catalyst for co-operation," he added.[1]

Water is essential to life. Without water there is no life. Experts rank water as only second to oxygen as essential for the very survival of life.[2] It has been called the planet's livelihood – it pulsates through every crevice of our existence. It is fundamental to the very survival of every human being, rich or poor, urban or rural. Life without water is impossible. Yet, today, we are facing a crisis as the demand for freshwater outstrips supply and pollution continues to contaminate rivers, lakes, and streams.

Water is probably the only natural resource to touch all aspects of human civilization – from agricultural and industrial development to the cultural and religious values embedded in society. It is no exaggeration to say that, if water is in crisis, development is in crises too. From being a necessity, water has now become a luxury. People have died fighting over water. Unless we act now, the future is frightening. It is not water scarcity that is the problem today but our ways of using and managing it. Many of the problems of the water sector can be traced to the way water is planned, regulated,

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[1]"World Water Day 2002: Water for Development," IAEA Press Release March 2, 2002, 3

[2]P. Surya Rao, "Water: Balm of Life," *The New Indian Express*, April 2, 2002.

managed and financed.

The United Nations General Assembly (Resolution 55/196) had declared 2003 the "International Year of Fresh Water." The international community has finally realised that there is a global water crisis. "No water, no future." In the World Summit on Sustainable Development in Johannesburg, in 2002, water was considered a priority, crucial to development. Water is also a vital issue to global justice. Kofi Annan spoke of the need for a new stewardship of water resources so as to make them available to all. The paradox is that in a globe of which three-quarters are covered by water, there is scarcity of fresh water. At the heart of this ecological crisis is the misuse of the most pervasive constituent of planet earth. The challenge in sustainable development is the management of the water resources.

Water is a central symbol in the teaching and rituals of many religions. In India, water has been considered holy. In the Bible, water is a powerful element in the creation of God. The breath of God hovers over the face of the waters when his word creates the light. Water is also richly woven into the Christian liturgy and worship.

2. Fresh Water, a Scarce Resource

Of all the water on earth, only 2.5 per cent is fresh water; the rest is salty. This means that fresh water is a scarce resource. Two-thirds of this water is locked up in icecaps and glaciers in Antarctica, Greenland and the Arctic. Of the remaining water, 20% is in areas too distant for human access. Of the remaining 80%, because of monsoons and floods, three quarters are available at the wrong time. Even here, 70% of what is available is used for agriculture and the rest goes to household use and industry. Because of increase in population, demand for water is doubling worldwide every 26 years. Even this percentage of fresh water (less than 1%) is not distributed equitably. Moreover, studies on underground water tables show that they are falling by as much a meter a year in many parts of Mexico, India, Yemen, and China. For the poor countries of the global South (where three billion people live on less than $2.00 per day), clean water is becoming a scarce resource difficult to acquire.

Humans need water for drinking, cooking, washing, industries, energy, transport, rituals, fun, life, etc. It is about this good, which nature offers so liberally to all, that we face a multiple global crisis. Sustainable human development depends on the availability of fresh water. It is estimated that

more than one third of the global food production is based on irrigation, a significant portion of which may rely on unsustainable ground water sources. Irrigation accounts for the major use of water in developing countries – as high as 70% in India and 60% on average.

3. Water Crisis: A Major Threat to Survival

Water, the unique substance that gives our planet life, has become highly problematic. Parts of the world have too much or too little of it. In other places, it is polluted or unequally distributed. Rapid population growth, combined with industrialisation, urbanisation, agricultural intensification, and water-intensive lifestyles is resulting in a global water crisis. About 20% of the population currently lacks access to safe drinking water while 50% lacks access to a safe sanitation system. Falling water tables are widespread and cause serious concern, both because they lead to water shortages and, in coastal areas, to salt intrusion. Both contamination of drinking water and nitrate and heavy metal pollution of rivers, lakes, and reservoir are common problems throughout the world. The world supply of freshwater cannot be increased. More and more people are becoming dependent on limited supplies of freshwater that are becoming more polluted. Water scarcity, like food security, is becoming a major national and regional priority in many areas of the world. The sad and brutal truth is that the situation on the ground is worse, not better. Conflicts are worsening; pollution is unabated; ground-water levels continue to fall; rivers are drying up; and there is no sign of greater efficiency or prudence in using water.[3]

3.1. Global Population Growth

Global population has more than doubled since 1950 and reached six billion in 1999. The most recent population forecasts from the United Nations indicate that, under a medium-fertility scenario, global population is likely to peak at about 8.9 billion in 2050.

In parallel with these changes, there have been profound demographic shifts as people continue to migrate from rural to urban areas in search of work and new opportunities. Since 1950, the number of people living in urban areas has jumped from 750 million to more than 2.5 billion people. Currently, some 61 million people are added to cities each year through rural to urban migration, natural increase within cities, and the transformation of

[3]A. Vaidyanathan, "Imperatives of Water Governance," *The Hindu*, March 20, 2004, 10.

villages into urban areas. Urbanisation creates new needs and aspirations, as people work, live, move, and socialise in different ways, and require different products and services. Urban environmental impacts and demands are also different. By 2025, the total urban population is projected to double to more than five billion, and 90% of this increase is expected to occur in developing countries. Many of them depend on ground water for living. But as cities grow, can subterranean water sources be sustained?

3.2. Water Scarcity on the Increase

Sustainable human development depends on the availability of fresh water. It is estimated that more than one kind of the global food production is based on irrigation, a significant position of which may rely on unsustainable ground water sources. Despite progress in the last two decades to improve access to safe drinking water, some 1.2 billion people today go without the same. 2.4 billion people lack proper sanitation and more than 3 million die every year from diseases caused by unsafe drinking water. Today the world's number one killer is polluted water. It kills more than 25000 people a day. It is the common route to the spread of infectious diseases. In India and other poor countries, many die of water-borne diseases. Diarrhoea alone kills four million a year. Thus, in one year alone, water pollution, poor sanitation, and water shortages will kill over 12 million people, said Klaus Topfer, Executive Director of the United Nations Environment Programme (UNEP). According to him, millions more are in bad health and trapped in poverty, much of their energy and time wasted in the quest for clean water.[4]

Areas of water scarcity and stress are increasing, particularly, in North Africa and West Asia. In the next two decades, total water demand is expected to increase by 40%. By 2025, two-third of the world's population may live in countries with moderate or severe water shortages. Nearly 7 billion in 60 countries will face water scarcity by 2050. The UNEP's report 'Global Environment Outlook 3' says that if we go on using water in the way we use it now, in thirty years two-thirds of the world will not have sufficient water. "Water, water, everywhere, not any drop to drink," cried the English poet, Coleridge.[5] Today our cry is: "Water, water, everywhere, no clean

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[4]"World Water Day 2002: Water for Development," lAEA Press Release, March 2, 2002, l.

[5]S. T. Coleridge, "The Ancient Mariner," *The Norton Anthology of English Literature*, Seventh Edition, Volume 2, 416.

water for most to drink."[6]

3.3. Women are the Most Affected

In many societies, water is at the core of women's traditional responsibilities: collecting and storing water, caring for children, cooking, cleaning, and maintaining sanitation. These tasks often represent a whole day of work; in some regions, women spend up to five hours a day collecting fuel wood and water and up to four hours preparing food. Providing access to clean water close to each home can drastically reduce women's workload, and free up time for other more productive economic activities. Water stress leaves women the most vulnerable. Without a ready source of water they may have to walk for several hours everyday to find it, or send their children to fetch it. Child nurturing and education suffer as the available water may be unfit for human use.

3.4. Crisis of Water in India

Parched heavens, scorched earth, soaring thirst, water is the biggest crisis facing India in terms of spread and severity, affecting one in three people in cities and villages. Already in Chennai, Bangalore, and Delhi, water is rationed. With the lives and livelihoods of millions at risk, the nightmare has worsened.

India's population is expected to touch 1,650 million by 2050, which means the demand for water will rise from 634 bem now to 1,447 bem. Nearly, two-thirds of this will be for irrigation, as India would need to double its food production from the current 200 million metric tonne to 450 million.

4. Pure Water: A Fundamental Right of All

Michael Gorbachev remarks: "Water is the important single element needed in order for people to achieve the universal human right to a standard of living adequate for the health and wellbeing of individuals and families."[7] Without water, we cannot address the problems of poverty and disease. We can neither achieve sustainable development, nor can we conserve biodiversity, preserve habitats or restore ecosystem.

The promise of life in abundance cannot be separated from abundance of fresh, clean water for all life and all humanity, a gift to be shared among

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[6]S. Arockiasamy, "Water, the Womb of Life" (Editorial), *Vidyajyothi* 6, 7 (July 2003), 577-578.

[7]See, for example, Universal Declaration of Human Rights, article 25.

all and conserved for all, including future generations of various living species. Water is the basis of life; it is the gift of nature; it belongs to all living beings on earth. It is not a private property but a common resource for the sustenance of all. Aqua robbery by corporates is becoming common in the industrially developing countries but dereliction of state duty is denying humanity the basic source of water. One instance from the state of Kerala in India can very well establish this.

The Hindustan Coca Cola Beverages established its unit in 1998-99 in approximately 40 acre plot (previously multi-cropped paddy lands) at Plachimada of Perumatty Panchayat in Chittur Taluk of Palakkad district, Kerala. On an average, about 85 lorry loads of beverage products (Mirinda, Thumbs Up, Coco Cola, besides Kinley Mineral Water), each load containing 550-600 cases and each case containing 24, 300 ml. bottles leave the factory premises every day. More than 60 bore wells (besides two open wells) are sunk in the factory compound extracting some 15,00,000 litres of water on a daily basis. The site is located a few metres away from the main irrigation canal from the Moolathara barrage. The site is located about 3 km away from the Meenkara dam reservoir, a few hundred metres west of Kambalathara and Vengalakkayam storage reservoirs and 2 km away from the main Chitturpuzha (river). Processing activities as purification of water, preparation of the bottled drinks, cleaning of bottles, etc., generate a large quantum of contaminated water and chemical waste besides plastic, paper, metallic, and other solid waste. Certain resources like air, sea, waters, and the forests have such a great importance to the people as a whole that it would be wholly unjustified to make them a subject of private ownership.

The nature's gift of water is God's blessing for his creation. This good is being commoditised, controlled, contaminated, and wasted, while vast millions remain thirsty.

4.1. Water: Basic Need for All

Water is a basic need for survival. So clean water is a basic human as well as environmental right of all, based on the right to life. It is a universal social and environmental obligation. As such, it is unquestionably the responsibility of governments (both at the national and the local level) to ensure that every one has access to his or her minimum requirements. Since water is a fundamental right, it cannot and should not be commercialised or privatised. By privatising water, the government allows the multinational corporations to 'steal' the water of the common people. According to Vandana Shiva, "No

government has the right to sell water since it is in the public trust that belongs to the people. The Government is only the custodian of this public trust. Water should not be made a commodity. There is no substitute to water and the talk of alternatives in the form of bottled water or soft drink was a myth."

Public systems are not always efficient, and there is a growing desire among economists and decision-makers to hand over the responsibility of delivering water to private companies. The trouble is that the primary job of private companies is to make profits, and they are not usually concerned about the rights of individuals or of the need for equitable distribution of their products. Market forces controlled by corporate agencies, besides contaminating water resources, have made water a commodity possessed, controlled and traded for profit. There clearly is good money to be made in delivering water, and the private sector is ready and willing to add this vital resource to its range of products, as, indeed, they have already done in huge quantities with bottled water.

Private companies run only five per cent of the world's water works and they are in 56 countries. Vivendi earned 12 billion dollars in water-related revenue last year. Thames Water, which unequally and controversially has ownership of London's water assets, earned $2.5 billion. Suez has contracts in 130 countries with 115 million customers.[8]

But efficiency alone is not enough to justify handing over such a resource to an outside agency, unless it is willing to take on a universal service obligation to ensure that all basic needs are met, on a transparent, accountable and permanent base.

4.2. On the Right to Water

The General Comment on the right to water, adopted by the Covenant on Economic and Cultural Rights (CESCR) in November 2002, is a milestone in the history of human rights. For the first time, water is explicitly recognised as a fundamental human right and the 145 countries which have ratified the International CESCR will now be compelled to progressively ensure that everyone has access to safe and secure drinking, equitably without discrimination.

The right to life is a foremost human right sans which society ceases to

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[8]Darryl D' Monte, "A Bid for Water," *The Hindu* (Sunday Magazine), April, 13, 2003, 2.

exist. Air, water and everything without which life cannot exist are universal assets. Preserving every ounce of safe water and breathable air is humanity's highest priority. Under such circumstances every drop of rain has to be harvested, every well has to be conserved and every pool or pond has to be preserved.

In State of Tamil Nadu versus M/S Hind Store (AIR 1981 SC 711), it has been observed as follows: "Rivers, forests, minerals and such other resources constitute a nation's natural wealth. These resources are not to be frittered away and exhausted by any one generation. Every generation owes a duty to all succeeding generations to develop and conserve the natural resources of the nation in the best possible way. It is in the interest of mankind. It is in the interest of the nation."[9] The General Comment in the verdict states that "the human right to water entitles everyone to sufficient, affordable, physically accessible, safe and acceptable water for personal and domestic uses." It requires governments to adopt national strategies and plans of action which will allow them to "move expeditiously and effectively towards the full realisation of the right to water." These strategies should have the following qualities: 1) based on human rights law and principles; 2) cover all aspects of the right to water and the corresponding obligations of countries; 3) define clear objectives; 4) set targets or goals to be achieved and the time-frame for their achievement; 5) formulate adequate policies and correspond achievement indications.

Generally, governmental obligation towards the right to drinking water under human rights law broadly falls under the principles, respect, protect, and fulfil. The obligation to respect the right requires parties to the covenant to refrain from engaging in any conduct that interferes with the enjoyment of the right, such as practices which, for example, deny equal access to adequate drinking water or unlawfully pollute water through waste from state-owned facilities. Parties are obligated to protect human rights by preventing third parties from interfering in any way with the enjoyment of the right to drinking water. The obligation to fulfil requires parties to adopt the necessary measures directed towards the full realisation of the right to drinking water.

4.3. Water for the Future

It is our fundamental obligation to prevent water scarcity and pollution and to preserve it for generations. During the Summit in Rio de Janerio, UNESCO

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[9]V. R. Krishna Iyer, *"The Right to Water," The Hindu*, January 28, 2004, 10.

offered the following vision of the future: "Every generation should leave water, air and soil resources as pure and unpolluted as when it came to earth. Each generation should leave undiminished all the species of minerals it found existing on earth." The present generation needs to make a sustainable use of water so that earth's water supply will remain abundant and clean for future generations. We cannot accept that the powerful few with means to control the resources destined for all should destroy it. We cannot allow our generation to be butchers of the next. The goal of all actors in the management of water resources should be to meet human needs rather than to control and dominate.

Water is a common good and is a basic need for all. It is to be received as a gift, used responsibly and shared equitably. We have to conserve and enhance the diminishing resources and pass on this precious gift, clear and abundant, to future generations. This calls us to a shared ethical responsibility and a new quality of stewardship for which we need not only efficient and participatory management strategies, but also a new spirit nourished by the value perspectives of cultures and religions. A control and misuse of this resource by the powerful few which deprives the poor by mega projects for profit and pollutes it without social accountability is a negation of the values of justice and equity, sharing and solidarity.

5. Towards Alternatives

5.1. Need for an Attitudinal Change

Water is treated as though it were available in unlimited quantities. We cannot keep treating water as if it will never run out because there is only a limited quantity of it on Earth. To manage it better, we need to work together and set priorities that respect the limits. We need to change our fundamental attitudes towards water resource management. We need a more holistic approach that emphasises gender, social justice, and human rights. It should be based on a better analysis of patterns of use, knowledge, and skills regarding conservation and sustainable use of the resources.

Management of the water resources should be participatory and involve users, planners, and policy-makers at all levels to promote a sustainable water use. A sustainable use means a new style of life guided by responsibility for sharing, conserving, enhancing this stream of life, and a renunciation of profligacy of this vital element.

The right to conserve, use and manage water was fully vested with the

local community. This was the very basis of water democracy. Any attempt to reduce or deny this right is a crime. Governments and other public sector organisations, businesses, and NGOs need to demonstrate a greater commitment to environmental sustainability, gender equity, and social justice in integrated water resources management. What we need today is to arise and awake and share what belongs to all through social justice.

5.2 Integrated Water Management

The International Year of Freshwater 2003 offered an opportunity to refocus our attention on protecting and respecting our water resources. It gave an opportunity to be aware of many threats to our water resources and the ecosystems on which we depend, including the conversion of natural ecosystems to pasture and farmland, pollution, over exploitation and extraction, alien invasive species, mass tourism and climate change.[10] We must recognize that the earth's life-sustaining cycles are delicately interlinked. The hydrological cycle, the erosional cycle, and the nutritional cycle are delicately interlinked, and that any interference with the linkages leads to serious environmental and ecological imbalances. As population increases and technology grows, the linkages are affected by human actions.[11]

The goals of protecting our water sources and Earth's ecosystems, therefore, cannot be separated. We must do both, now. For modem water resource managers, the protection of nature goes hand in hand with the pipes and pumps that ultimately bring water to homes and fields. Decades ago, for example, the New York council calculated that it was cheaper to purify drinking water by draining it through forested catchments than by building a new treatment plant. With none of the controversy that surrounds wildlife conservation, the forests were protected, and New Yorkers enjoy exceptionally fine drinking water.

Biodiversity conservation and water management are two sides of the same coin. Both are essential for alleviating poverty, and both require integrated ecosystem management. For example, in the southern Yunnan province of China, poor forest management upstream has affected an entire watershed. Deforestation of mountain slopes has led to severe erosion, after

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[10]Yolanda Kakabadse, "Where Life is Welcome in World Conservation: Moving Water," *The IUCN Bulletin* 1 (2003).

[11]T. N. Narasimhan, "Water: A Broader Understanding," *The Hindu*, March 9, 2004.

torrential run-off, heavy deposition of silt in paddy fields and wetlands. The economic impacts on small-scale agriculture are compounded by a marked decline in forest products such as mushrooms and timber.[12] Tree felling reduces evapo-transpiration and allows saline groundwater to rise close to the soil surface. Salinity may be reduced by planting trees in these upstream areas to increase evapo-transpiration and lower water table once again.[13]

5.3. Some Water Saving Measures

With respect to the physical alternatives to fulfil sustainable management of fresh water, there are two solutions: finding alternate or additional water resources using conventional centralised approaches, or better utilising the available limited amount of water resources in a more efficient way. At the core of solutions stands our knowledge of earth's water cycle, and how fresh water resources are renewed.

India receives an annual precipitation (snowfall and rain) of around 4,000 bcm. Of this, the run off accessible water is 1869 bcm, of which barely 690 bcm is used. Nearly 1,179 bcm of water drains into the sea, much of it in the 100 days that define India's wet season. India's water problems stems from disparate precipitation and the fact that while nearly 70 per cent of precipitation occurs in 100 days, the requirement is spread over 365 days. Among the various alternative technologies to augment fresh water resources, rain water harvesting and utilisation is a decentralised, environmentally sound solution, which can avoid many environmental problems often caused in conventional large-scale projects using centralised approaches. Rainwater harvesting, in its broadest sense, is a technology used for collecting and storing rainwater for human use from roof tops, land surfaces or rock catchments using simple techniques such as jars and pots as well as engineered techniques. Water-saving measures include improving irrigation techniques and preventing water loss as high as 40% from transportation, distribution, and storage systems.

5.4. Water for Global Peace

Gorbachev called for 'water for peace' and 'peace for water', contrary to the popular belief that the next world war will be over water, not oil-triggered off by a remark by former World Bank Vice-President, Ismail Serageldin, now

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[12]Ton Van Der Zon, "The Complete Ecosystem, World conservation: Moving water," *The IUCN Bulletin* 1 (2003).

[13]David Lamb, 'Restoration: An Inexact Science," *The IUCN Bulletin* 1 (2003).

in the world water council. Conflicts over water take a long time to build up. They do not present flash points, although they can remain a fostering sore between hostile countries.

Not many may be aware that the Indus Water Treaty, now 43 years old, sharing the tributaries between India and Pakistan, has never been abrogated even during two wars. The agreement was brokered by the World Bank and remains a model for amicable sharing of resources. Short-sightedly, the Jammu and Kashmir Legislative Council had passed a resolution, asking the centre to review the treaty. Local politicians have alleged that Kashmir suffers a loss of Rs. 6,5000 million due to it. The Mekong treaty, between Thailand, Cambodia, Laos, and Vietnam, is yet another example where countries have chosen to cooperate on sharing resources. Without powerful agreements, it has the potential to bring about the opposite results.[14] Therefore, governments should involve interest groups at all levels of decision making, and facilitate the participation of all stake holders, particularly women, as far the water resource management is concerned.

6. Conclusion

In view of introducing a rationalised use of water, the following practical suggestions could be made: 1) Stress should be laid on building water storages, increasing capacity in basins and working on inter-basin transfers wherever possible. 2) Pricing and efficiency to be introduced in irrigation management. Pricing to depend on the benefits and electricity used to pump water. Now public irrigation is highly subsidised. There is increasing intensity of competition to access the water available in public systems, competitive deepening of wells in the face of declining ground water levels. The cost of acquiring water at the user end to be substantially increased along with tighter management and stricter enforcement of regulations by the state and the user communities. Governments should ensure that allocations and scheduling of water in public systems conform to clearly specified rules and enforce regulations concerning groundwater extraction. 3) Change in the cropping patterns. 4) Systematic monitoring of trends in water tables, volume, and quality of water extracted and their use. Let us unite, agitate, protect, and demand our right to water!

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[14]Darryl D' Monte, "A Bid for Water," *The Hindu* (Sunday Magazine), April, 13, 2003, 2.

Journal of Dharma 31, 4 (October-December 2006), 497-504

HINDUISM AND NATURAL ENVIRONMENT

Radharani P.♦

1. Introduction

The environmental ethics is the discipline that studies the moral relationship of human beings to the environment and its living and non-living things. Among different theories of ecology one states that nature has to be protected, including prevention of global warming, for the sake of man. Because man lives in nature and nature has to be protected, sound and air pollution cured, just to make man live happily, man himself claims that he is the highest form of creation and so nature can be considered an instrument for his happiness.

The Western traditions consider man as the centre of the moral universe. They think that the world exists for the benefit of human beings. Nature has no intrinsic value and there is nothing wrong in the destruction of plants and animals, if it will not do any harm to human beings. Aristotle holds that the nature has made all things specifically for the good of man and, therefore, he gives only instrumental value to non-human things of the nature. He says: "Plants exist for the sake of animals and brute beasts for the sake of man – domestic animals for his use and food, wild ones for good and other accessories of life such as clothing and various tools. Since nature makes nothing purposeless or in vain, it is undeniably true that she has made all animals for the sake of man."[1] Another interpretation of ecology is to regard nature as having supreme value. Nature is to be protected for its own sake; it has nothing to do with human beings.

2. Environmental Problems and Deep Ecology

There is nothing wrong in saying that in spite of modern technological and scientific development man considers his land, tradition, culture, and religion as precious and tries to defend all these. It is also true that environment and its problems are the most talked about subject, but little understood in our country. From the very beginning, human life and the environment are

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[1]Peter Singer, *Practical Ethics*, Cambridge: Cambridge University Press, 2000, 267.

interdependent and interrelated to each other. Human beings always depended on their ecosystem for food, fuel, fertilizers, etc. Environment has got a direct impact on the social life of mankind. Today environment degradation has become one of the most serious global problems.

Terrestrial pollution, the pollution of fresh water, atmospheric pollution, the green house effect, etc., are some of the general environmental issues that cache the attention of environmentalists. The growth of human population threatens the viability of planetary life support system. The uncontrolled use of biocides do great harm to human health and it also paves the way for the emergence of biocide resistant varieties of pests. The cruelties inflicted upon non-human animals in course of scientific study are really heart breaking. As a protest against all these problems, there arise the environment movements.

One can call them as deep ecologists who want to preserve the integrity of the biospheres for its own sake without noticing the possible benefits of human beings. They realize that an anthropocentric attitude has a bad effect on eco-philosophy and, therefore, they are not in agreement with the slogan, "nature exists for the convenience of man." For providing the due place to environmental ethics and eco-philosophy, one should abandon anthropocentrism. Human domination of nature destroys the beauty and autonomy of the natural world. Ethics of deep ecology considers species, ecological systems, nature as a whole as the object of value rather than sentient beings. All things in this world have an equal right to exist and blossom and they have their own intrinsic worth. So, the deep ecology movement approves biospheric egalitarianism. Arne Naess (a distinction between shallow and deep environmental movements was introduced by him) believes that the deep satisfaction that we gain from close relationship with other forms of life in nature contributes significantly to the quality of life.

> Shallow ecological thinking was limited to the traditional moral frame work; those who thought in this way were anxious to avoid pollution to our water supply so that we could have safe water to drink and they sought to preserve wilderness so that people could continue to enjoy walking through it. Deep ecologists, on the other hand, wanted to preserve the integrity of biosphere for its own sake, irrespective of the possible benefits to humans that might flow from so doing.[2]

[2]Singer, *Practical Ethics*, 280.

So in the field of environmental ethics the difference between instrumental value and intrinsic value has been of respectable importance. In instrumental value, we consider the value of things as means, means to some other ends. Any way, it is morally wrong for human beings to pollute and destroy the natural environment and an uncontrolled consumption of the natural resources leads to destruction.

3. Tree Worship and Its Significance in Hinduism

In this context, it is worth noticing that the ancient Indians accepted and integrated the above said ecological ideas. They believed that man and nature constitute an organic unity; for them nature is as much important as man. Man without nature is an abstraction in the same way as nature without man is an abstraction. In India, religion and environment protection go together. India has a long tradition of prudent use and wise conservation of all resources that are useful to people.

From the very beginning of mankind trees came to be considered as revered and absolutely necessary for mankind. Later, the idea of God and worship originated in the human mind. The ancient Indians looked at trees as the choicest gift of God to man. The religious minded people of India worshiped God in different forms, as father, mother, guru, idols, stones, trees, etc. Trees are considered to be symbols of different gods or deities. Trees and plants are considered as living creatures endowed with personality. Presently, scientists have proved that if trees are grown properly and managed properly they can provide a sustainable basis for the bulk of the energy.

It is true that environment protection originated in India in a magico-ritualistic context. The ancient Indians have realized that survival and prosperity of one with the exclusion of the others is not practical. Hinduism considers each and every phenomena of the earth such as trees, rivers, mountains, etc., as sacred (deep ecology) and believes that these phenomena are protected by their own presiding gods or goddesses. So, any direct harm done to the material world is really an ill treatment towards gods. There are people who criticize and condemn tree worship as primitive in their race to become modern in the Western sense. It may be true that tree cult is a lower form of religion, though the worship of tree has its utility and usefulness. This was observed long ago by the *Ṛiṣis* who had profound love and regard for plants and trees. Tree worship has existed all over the world and all human races passed through this stage of worship. Realistic reverence of

trees is widespread and tree worship is common all over India. Various trees, plants, and groves are worshipped by Indians belonging to different class, caste, and group. Among the worshipped trees and plants some have got primary importance, as they have considered as tree of life by the Vedic Aryans.

The place of trees in the life of great spiritual leaders of India is worth noticing. Lord Buddha attained *nirvāṇa* under a banyan tree. The *Upaniṣads* preached us to believe in the unity of all life. God is one and He can be approached from as many forms as man can conceive; God is immanent in this universe and one can find Him in water, fire, and also in trees and herbs. All trees and plants are sacred and they possess the gifts of immortality, health, and general prosperity. Vedic people generally believed that every being of this world is in reality an embodied manifestation of the eternal reality. Ultimately, all the apparent differences will vanish. We perceive the differences because we are ignorant about the identity of all beings. This principle is the basis of all Vedic beliefs and myths connected with plants and trees. Worship, sacraments, and mystic charm are combined with it.

Hindus have identified different sacred trees with both the higher and local deities. The most popular God of the Hindus, Śrī Kriṣṇa identified himself with the Bo-tree in *Bhagavad Gītā*; the Bo-tree is explained as the dwelling place of Brahma, Viṣṇu, and Maheśvara – the Hindu trinity. Again, it is believed that Tulsi is the symbol of Viṣṇu, Kadam the symbol of Kriṣṇa, Bel the symbol of Śiva. There are many other trees which are sacred symbols of Gods. Further, the point every Hindu should remember is that they should worship tree as God but not God as tree. When some one worships a tree and protects it, it is really a worship of God and tree is a symbol; unfortunately, many Hindus forget this and they are not aware of this truth at all.

In India, trees are planted by the side of temples, streets, in funeral places, and also around house lands. In these places people carefully plant and protect various kinds of trees. There are various attitudes of men towards trees and plants, that is, the fear of the ghosts, spirits, devas, danavas, etc. Trees which are planted in holy places are considered as sacred trees, and village people will not allow to fell such trees due to their belief that if they do so the deities or ghosts residing in those trees would be displeased, that they might be punished by the god or spirit for not protecting them and would make their life unhappy. Village people have some mystic ideas and beliefs about spirits and ghosts who reside in certain shady trees; in general,

people have fear for such trees. Many Indians even today believe that it is unlucky to fell even common trees without first offering some tribute or offering (such as lighting a lamp, etc.). "The tree is praised as a beautiful creation and life-giver and the wood cutter begs pardon of the tree for the sin he is committing. The tree is also prayed not to hurt the sky by its upper part when it falls down, not to hurt the mid-space by its middle part and not to hurt the earth when it lies down."[3] Not only in India but also in many other lands around the world it is considered a dangerous thing to cut down a tree which is the residence of a God or a tree spirit.

Trees are worshipped for a great many purposes, according to changing ideas and problems. The Hindu ancestors considered it as their duty to protect trees because of their social utility. To protect trees from the hand of wood cutters was not an easy task; so, to protect them they attached some kind of religious holiness and it is through this route trees became object of worship. The Purāṇas warn people against the destruction of useful trees. Our ancestors are much aware of the usefulness of trees, groves, plants, and herbs. Indian religion, culture, and people, to a great extent, stood for environment protection. Hinduism preached us that man has to adjust himself with time, with nature, environment, and at times with supernatural potentialities.

The ancient people of India not only worshipped tree, they have also realized the medical value of many of the trees and plants. They have protected various trees and plants not only because of their sacredness but also because they are needed for their own well-being. They protect them, worshipped them and used them as cosmetics and medicine. Traditional herbal medicines are made out of trees and plants and the use of these medicines and cosmetics is something suitable to our ecological system. An ethno-botanist says: "Laboratory studies on biological remains in archaeological sites have revealed ... occurrence of certain plants in those times, extend of knowledge of plants, morphology among those people and occasionally other associations, such as plants used in worship, in gifts, in gardens and plants used as incense, cosmetics and medicines etc."[4]

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[3]B. Bhatt, *Ahimsa in the Early Religious Traditions of India*, Rome: CIIS, 1994, 19.

[4]S. K. Jain, "The Role of a Botanist in Folklore Research," *Folklore* 20, 4, (April 1979), 964.

Hinduism tried to expose to its followers the value of herbal treatment. For treatment the ancient Hindus solely depended on herbs and natural environment. But knowledge of herbal treatment was limited to selected people and they learnt herbal treatment from tradition and wanted to keep it as a secret; because of this secret nature many medicinal trees and plants are subjected to decay. Our ancestors depended on household remedies and folk medicines. In *Atharvaveda*, one can see descriptions of various trees and plants that have medicinal value. Ayurveda is one among the *upavedas* and it is based on the *Ṛgveda*. Modern physicians are taking serious interest in traditional herbal medicines. The botanists of India have realized the importance of the use of herbal treatment and they repeatedly express that this kind of treatment is totally in agreement with our ecosystem.

> Large sections of our people still depend on household remedies and folk medicines. Household remedies are often tested and effective prescriptions are based on simple inexpensive and usually easily available plants and plant products. Much of this information remains as personal knowledge and is passed on word of month from person to person or generation to generation. For various reasons, much of this knowledge is now getting lost. It is advisable and urgent that this knowledge is recorded and brought together for proper study and wider application. And this search is intended to screen the information and locate such new knowledge for scientific scrutiny.[5]

During the British rule in India, herbal and traditional treatments faced destruction; but today most of the state governments of India give encouragement to herbal treatment. Even though tree worship is the lowest form of worship, and has undergone a lot of change in the modern times, it could retain popular support even today in spite of the technological change and modern scientific development of the world. For, it will promote the protection of our natural wealth.

4. Sacred Groves: The Land of Genetic and Plant Diversity

Now a days, people are more aware of the environmental ethics, the result of environmental pollution, the necessity of preserving forests, etc. They, however, are least bothered about protecting the treasures of this land. There has been an ecological balance in the world. The unbridled development of industries leads to an exploitative use of nature, which gives rise to a rapid

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[5]Jain, "The Role of a Botanist in Folklore Research."

fall in resources. Basically, this results in the complete destruction of natural resources. Indiscriminate cutting down of trees is a matter of grave environmental concern. The protection of patches of forests as sacred groves is based on the conservation ethos of ancient people all over India. The sacred groves had an important part to play in the life of the rural people. Indians dedicated these sacred groves to gods and goddesses; they, therefore, protected trees and forests with great care. The forests have been really life for tribals and other forest communities.

The sacred groves are different in size from a few trees to dense forest covering vast areas of land. The protection of these sacred groves is not a matter of blind faith. For the protection of our earth, the protection of these groves are important because they are land of genetic and plant diversity, which have disappeared from the land outside the sacred groves. In these groves one can find many endemic and endangered plant species. "Ecosystem generate and support life, keep selection pressure high, enrich situated fitness and allow congruent kind to evolve in their places with sufficient containment. The ecologist finds that ecosystems are objectively satisfactory communities in the sense that organismic needs are sufficiently met for species to survive and flourish."[6]

Mother Earth gives man enough to satisfy his daily needs, but without noticing this man exploits his environment in a harsh manner. The ancient generations protected the groves as places of worship. The necessity of protecting the environment is the implied intension of this belief. Even today, the religious beliefs to some extent help the protection of the sacred groves. Some of the ancient groves still exist on the land of ancestral homes and in some temples of Kerala. Some sacred groves still exist in various parts of India, due to the influence of Hinduism.

The sacred groves have religious, cultural, and environmental aspects. In ancient India these sacred groves were the meeting place of the people at some special occasions, and those meetings project the integration of community. The rapid growth of population, increasing needs, modernization, etc., are the causes that lead to the destruction of sacred groves. Modernization and urbanization make great change in social values and religious beliefs and the result is the decline of sacred groves. Their destruction may create an ecological imbalance.

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[6]John H. Pie, ed., *An Introduction to Applied Ethics*, New Delhi: Cosmos Publications, 2002, 112-113.

By protecting the sacred groves man is protecting not only the ecosystem but also he is protecting himself. In many places paddy fields are situated close to the sacred groves. Scientists, especially in Kerala, point out that there exist an interdependent relationship between paddy cultivation and sacred groves. The sacred groves work as water reservoirs and they can give adequate irrigation and fertility to the soil. Most of the sacred groves are treasure houses of fresh water. By protecting them, the water scarcity, one of the major problems facing mankind today, can be solved to some extent. By destroying the sacred groves we are not only intensifying the problem of water scarcity, but also forgetting the ecosystem.

5. Conclusion

A close relationship with nature gives human beings satisfaction and it contributes significantly to our life quality. By identifying with nature one can enlarge the boundaries of the self. Each one deserves his/her own self respect. To respect and to care for oneself is also to respect and to care for the objects around, with which he identifies himself. For attaining self-respect and self-realization one should respect and realize everything around him. Human understanding of the environment, with respect to green house effect, acid rain, etc., has made him realize that the environment, though it appears very large, cannot be sustained. The environmental protection must be taken into account in developmental programs, and then only the progress of mankind and preservation of ecology will be guaranteed. For the very existence of this earth the mutual support of all living and nonliving things is very important. An awareness of environmental ethics has to be created among various groups of people through education and mass awareness programmes. Religions shall promote the idea of tree worship not for the sake of religion alone but for the sake of man because religious thinkers realized that human survival depends on plant growth. It is really interesting to note that today love and regard for the forests, trees, plants, and plant products are gradually increasing; but it is a fact that more encouragement and attention are due in this area of life.

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Reflection

WHEN THE SOURCE OF LIFE BECOMES A COMMODITY

K. P. Sasi♦

"In the beginning there was just water...
All this world is woven, warp and woof on water" (Upanisad).

"We made from water every living thing" (Koran, 21:30).

"For my people have committed two evils; they have forsaken me the fountain of living waters, and hewed them out cisterns, broken cisterns, that can hold no water" (Jeremiah 2:13).

All religions had an inherent respect for water. Apart from the organised religions, indigenous systems of faith recognised water as a spiritual entity. Water bodies were worshiped. In India, the Ganges, the Yamuna, the Brahmaputra, and most of the rivers were worshipped as Goddesses.

Water is the source of all life. All life on earth can move only if there is water within them. Most of human body as well as of all other species consist of water. "There is no life possible without water. Water is a part and parcel of the living machinery," said the discoverer of vitamin C, Alber Szent-Gyorgi.

Yet, water is one of the most threatened entities on the earth. The rivers, lakes, wells, ponds, and even ground water are dying. Modern development saw water as a mere object to be used as a resource for commodity production. With globalisation, the status of water transcended from a resource for commodity production to a commodity in itself.

Water as a commodity is today one of the most profitable business – more profitable than oil or software. The world water market is controlled by a handful of multinationals. Apart from controlling the world's water, they can also control the governments. International institutions and bodies like the World Bank, ADB, and the WTO actively facilitate this process.

♦**K. P. Sasi**, a film maker, cartoonist, and a fulltime social activist, is involved in multifaceted programmes for the uplift of the people and other species on the margins. His commitment in protecting the environment, especially from the careless corporate business institutions is both challenging and laudable.

What were the changing perceptions of water by human civilization? What are the major implications of these changing perceptions? What are the human, social, cultural, and spiritual costs? It may be difficult to go to these questions in detail in an article like this. However, this attempt is to perceive and evaluate some of these questions.

Till the era of industrialisation, nature was considered more or less as a source of life. With industrialisation, the human perceptions on nature began to change. Nature as a source of life slowly began to change to that of a resource for commodity production. This vision on nature became so strong that even today many social as well as environmental activists speak about protection of 'natural resources'. A philosophical vision of nature as source is very different from nature as a resource.

Industrialisation as well as colonisation changed the character of public perception of nature. The power of industry and the power of the empire demanded the loot of natural 'resources'. Commodity production was built on this loot.

In India, even for the first Prime Minister, Jawaharlal Nehru, who described large dams as 'temples of modern India', the perception of water was that of a resource which can strengthen the development of industry as well as agriculture. Nehru could not have dreamt of water being sold in bottles as a commodity. However, the new model of development he envisaged laid the foundation for the transformation of the civil society's perception of water. They recognised that rivers could be utilised for progress, even if the gods protested. Thus, the free flowing rivers in India were invaded by large dams. *Adivāsis* and the local populations were displaced. A new generation of victims of progress emerged in India. Water became a sheer resource.

The public perception of water as a resource is in direct co-relation with a Western development model followed by Jawaharlal Nehru. The irony of the situation is that the public in the West is clearly dissatisfied with their development model and many of them are looking for solutions in the Eastern spiritualities. In spite of the fact that the civil society of the West has been the beneficiary of colonialism in the industrially developing world and their administration has tried to protect their own nature much better than their counterparts in the developing world.

The water services in most of the countries were recognised as a state responsibility till 1990s. Since then the developing countries are being

pressurized to privatize the water services by the global powers and their institutions like the World Bank and ADB. Financial or infrastructural Aid from these financial institutions is being tied to economic liberalization. The solutions provided by these institutions to solve the water crisis are to put a 'price' on water. However, in reality, it means that the economically powerful may pay nothing or close to nothing for water, while the poor will pay through their nose.

The exploitation of nature is multiplied several times today with globalisation consolidating nation states as a single unified market. It works under a false notion of unlimited growth, with market as a central institution above all human action. Under this world view, everything that has a use value has an exchange value as a commodity. Everything can be bought and sold. Love, fresh air, water, health, education, culture, political decision, and what not – everything is made available in the open market. What is not marketed may not have any value. In other words, value is determined by exchange value alone. Water has, thus, become a commodity. When life supporting mechanisms are sold in the open market, how can life sustain?

The central argument to defend this intensified invasion of the market economy over nature is that, if water is not 'priced', it will be wasted by people. Thus, in order to make people realise the value of water, services that are normally a responsibility of the governments become profitable actions of the corporate world. The implication is that those who have the capacity to buy water can use water and those can't buy cannot use water. Thus, access to water will be denied to a large section of the human race. Forget the human beings. How about other species? Which currency should the elephants, monkeys, and crocodiles use to get water from the corporate world in future? How can modern state or the corporate world, both institutions unilaterally set up by one of the species in this planet assume ownership of something that belongs to all species of the present, past, and future?

According to Vandana Shiva, "by reducing water to an 'economy' and further reducing the water economy to 'a market economy', the World Bank's world view makes water privatization and commodification inevitable. In this world view, there is no 'water ecology', no 'water culture', no 'water democracy'." In this article, she goes on further: "In spite of privatisation having failed in country after country, and in spite of

community based approaches having been successful in different parts of India, the World Bank is aggressively pushing for water privatisation, the dismantling of community rights, and the enclosure of the water commons."

Water is a common necessity, common not just for human beings, but for all species on earth. It is a fundamental right guaranteed in the Universal Declaration on Human Rights. However, with globalisation, the number of countries as well as the number of people facing the water stress in India is on the increase. The main conflict between the institutions of globalisation and the growing number of poor in the world is based on the notion of right versus commodity. If you consider water as a right, then it is the responsibility of the governments to provide water to those who have no access to this basic need. If you consider water as something that can be bought and sold, then it is a resource as well as a product for the global corporate giants to make big money. The central question to those in power, thus, is 'how can you sell a human right?'

"Wars of the 21st century will be about water," says Ismail Sergeldin, a former Vice President of the World Bank. The water war is on. At the moment, the fight is between the corporate world, international financial institutions, and the governments, on the one side, and the local communities, poor people, and a large number of species who do not respond through the language of human race, on the other. But the character of this war will change very soon, if the rest of humanity does not make active intervention at this stage. The future war will be between communities, between regions, between states, and between countries. The tension between Tamil Nadu and Karnataka over Cauvery is only the tip of the iceberg of this future crisis. What is conveniently forgotten is when river Cauvery is shrinking, the effort is not to protect the river, but, surprisingly, to divide it. Further, what is also bypassed by many, especially those in power, including both the state executive and the judiciary, is the fact that Coca Cola is even now being provided with one million litres of free water from this river every day, even when the water privatisation debate is gaining momentum.

From Plachimada (Kerala) to Varanasi (UP), where local people are fighting against the global corporate giant Coca Cola and from sold river Sheonath in Chattisgarh to the banks of Ganga in the eastern UP, people are asking one simple question. The system which provides respect and

status to global corporate invaders can be changed only through active dissent of the affected world. The dissent is growing. Hundreds of struggles against the commodification of water have emerged. The struggle is to retain life and the source of life. Says Vandana Shiva: "We need to build water democracy, not water markets. We need to defend the rights of communities, not corporation. We need to conserve water not consume and destroy it. We need to design India's water future on the basis of people's vision, not that of the World Bank."

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Reg. No. R.N. 27399/75 ISSN: 0253-7222

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Published by
Dharma Research Association
Centre for the Study of World Religions
Dharmaram Vidya Kshetram, 560 029 Bangalore, India

Printed at
National Printers
560 029 Bangalore, India